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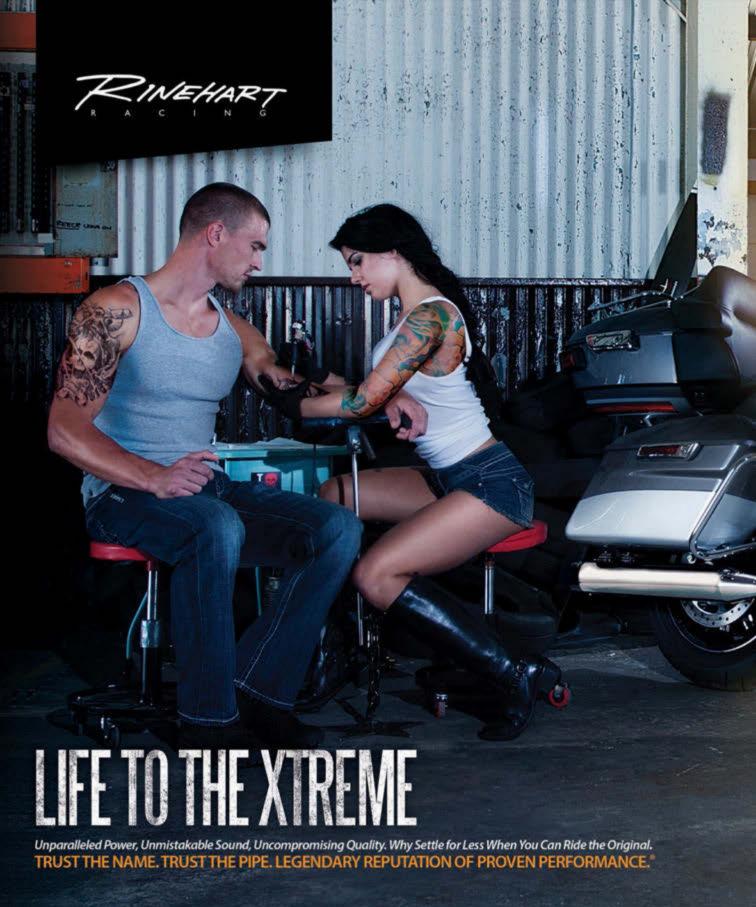
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Issue #322



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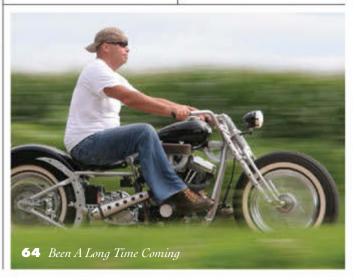
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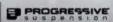








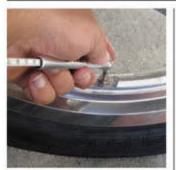
















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Ingredients for a sound performance

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A highly functional and sturdy bag with lots of zippered pockets and compartments

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A rider's and collector's dream

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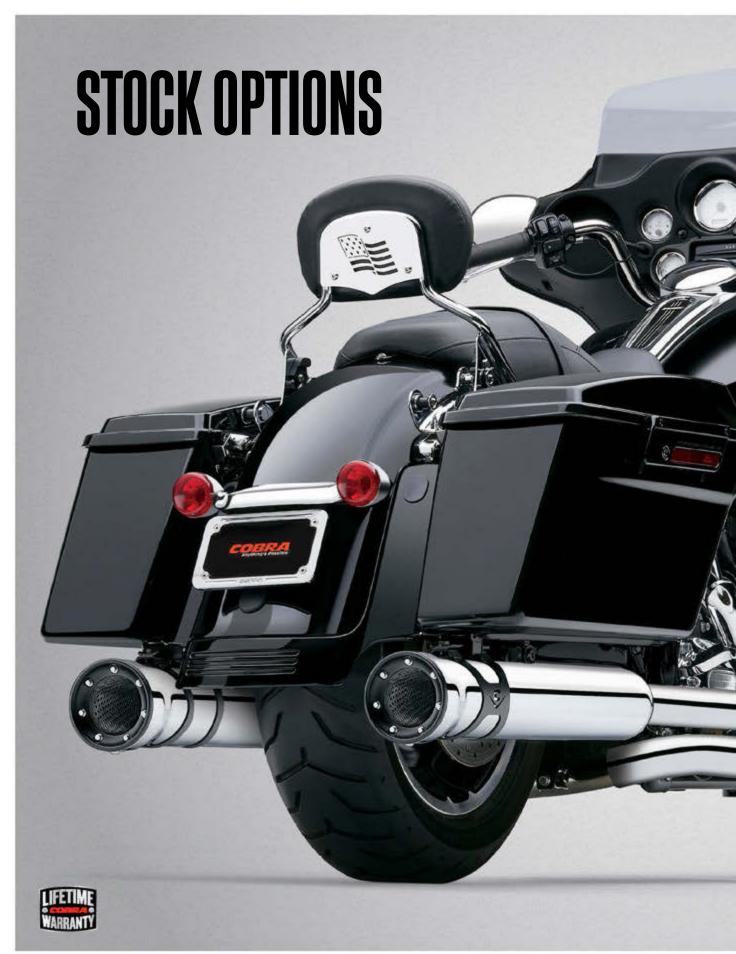




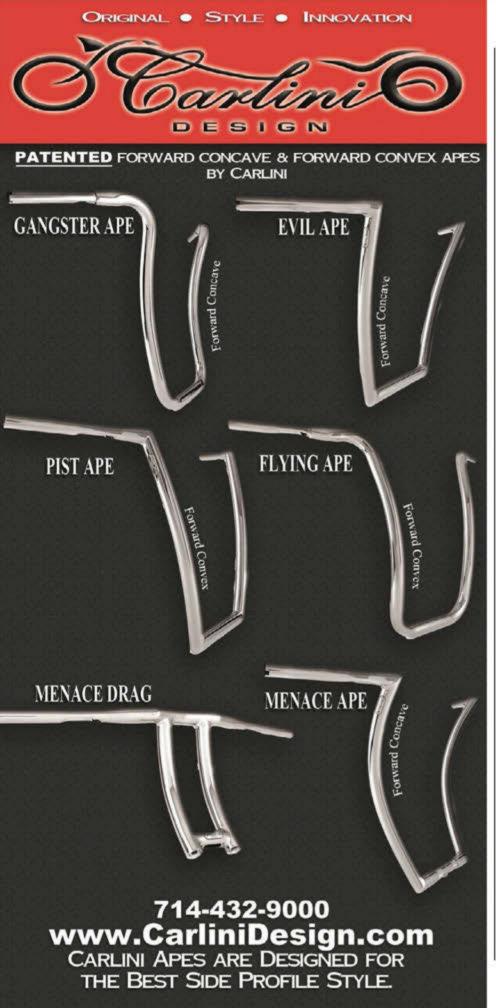














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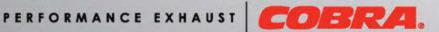


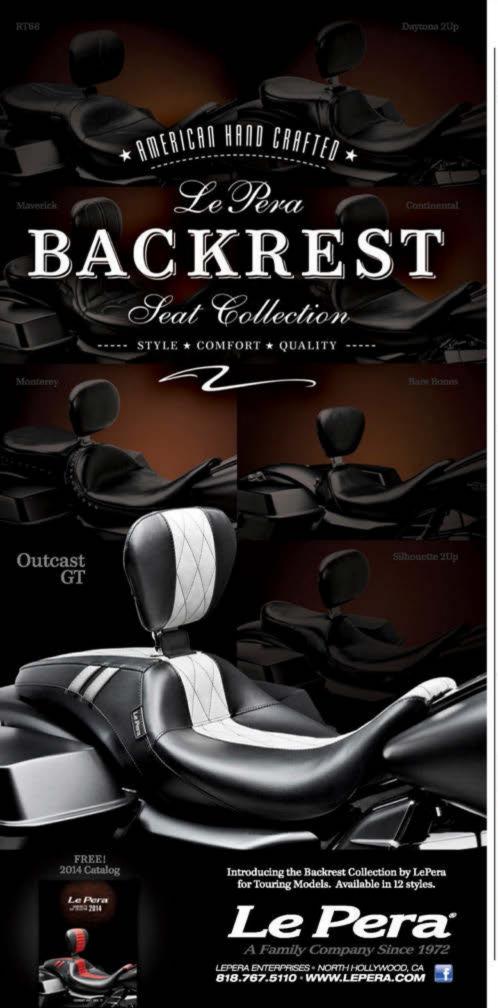
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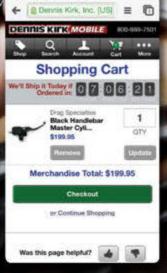
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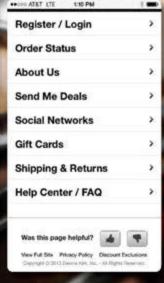
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Magazine Changes, Surgery & A Classic Ride

TRENDS AND FADS IN MOTORCYCLING HAVE COME and gone so often since *American Iron Magazine* was launched in 1989 that it's hard to keep track. Looking back, I realize how hard our team has

worked to identify and feature as many trends as we could fit into these pages. Some, like long-fork choppers, never really go away. While others, like custom FXRs, have recently come on strong after years of being dismissed, believe it or not, as looking too Japanese.

In addition to American Iron Magazine, our general-interest flagship title, we have published various magazines with a specific focus: Hot XL, the all-Sportster magazine, Indian Motorcycle Illustrated, American Glory: 110 Years of Harley-Davidson, and the techdominated American Iron Garage (which we have expanded to three issues a year for 2015).

After several years of publishing American Iron Motorcycle Bagger, we have decided that everyone would be better served by our rolling it back into American Iron Magazine, its initial home. We don't feel it's right that our readers must buy both magazines to get all the best editorial. Starting now, we will put all of the best articles, tech, and reviews — bagger or not — into

American Iron Magazine and make it the best we possibly can. Starting next issue, we will be adding a bit more bagger editorial and tech to AIM while still offering the well-balanced mix we always have. If you were a Motorcycle Bagger subscriber, we are rolling your subscription into American Iron Magazine. If you already have an AIM subscription, we will extend it by the number of MB issues you still have coming.

Wish Me Luck

SADLY, I MISSED DAYTONA BIKE WEEK FOR THE FIRST TIME in many years. And what's worse, I won't be riding motorcycles for awhile. It turns out that the pain in my right shoulder from last year's Motorcycle Cannonball is caused by a torn rotator cuff. This isn't something that will heal by

itself, and the early-March surgery is followed by four weeks in a sling and then several months of painful physical therapy. It could have been worse. Rather than dwell on this, I'll just say this means no riding until the summer. And, at least to me, that is worse than dealing with the surgery and recovery issues.



Sadly, I missed Daytona Bike Week for the first time in many years

Motorcycle Kickstart Classic

SORRY FOR THE DELAY IN GETTING THIS info out, but we have been pretty busy in the last few months. The first Motorcycle Kickstart Classic ride this year is planned for May 28-30. It starts and ends each day at the Wheels Through Time museum in Maggie Valley, North Carolina. We're trying this format, which is a change from the past when we were in a different town each evening. This time, there will be a number of great routes to choose from each day, and we all return to the festivities at the museum each evening.

As in the past, this event is designed for riders of classic (kickstart) motorcycles, so the pace is more relaxed, and the routes are well worth riding. Riders of all makes and models are welcome. Kickstart motorcycles ride up front, and those with newer bikes will ride in the back so they can pick up any parts that fall off.

All riders and passengers must register for this event (\$100 each, including a reception dinner, event T-shirt, museum admission, and other

goodies). You can register at AIMag.com or call Rosemary at 203/425-8777 ext: 114.

Ride safe, ride smart, have fun.



BUZZ KANTER Publisher/Editor-In-Chief, American Iron Magazine





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Increasing Engine Size II

STROKERS! BACK IN THE day, these engines ruled the open road, as well as Main Streets all across America. Making an engine a stroker was a drastic modification that involved using the flywheels from a different model engine to increase your motor's displacement in a big way. As I stated in my last column, boring out the cylinders to gain a few extra cubic centimeters was a common way to get a little more power, but you gained cubic inches by stroking it!

The flywheels in a Harley-Davidson engine change the up and down movement (stroke) of the pistons into the rotating motion needed to

turn the engine sprocket and, eventually, the bike's rear wheel. An engine's stroke is measured from the lowest point of the piston's travel in its cylinder, its Bottom Dead Center position (BDC), to the highest point of its stroke, its Top Dead Center position (TDC).

The location of the crankpin in the flywheels is what determines the engine's stroke. To increase the stroke and, therefore, increase the length component of the swept volume formula we covered in the last issue, you swap out the stock flywheels for a set that has the crankpin located farther out from the flywheel's center.

Back in the 1940s, '50s, and early '60s, the most common way to stroke your Knuckle or Panhead was to use the flywheels from an 80" H-D flathead. You see, this engine has 4-1/4" stroke flywheels. The 74" versions of the Knuckle and Pan have 3-31/32" stroke flywheels, so this modification made the pistons travel over 1/4" farther in the



The location of the crankpin in the flywheels is what determines the engine's stroke

cylinders (about 1/8" farther up and 1/8" farther down) due to the crankpin location. This boosted the displacement from the engine's original 74" to 80", since the bore of the cylinders is the same (3-7/16") in all these engines.

In late-1978. The Motor Company jumped onto the 4-1/4" bandwagon and started offering an 80" Shovelhead alongside its 74" models. The more powerful 80" (4-1/4" stroke) engine proved to be as dependable as the 74" (3-31/32" stroke) engine, so the 80" quickly replaced the 74" version. When the 80" Evo Big Twin was introduced in 1984, it was equipped

with the popular 4-1/4" stroke.

When the Twin Cam 88 engine versions were introduced, both came with a 4" stroke, which is just 1/32" (0.031") longer than the 3-31/32" stroke that 74" Knuckleheads, Pans, and older Shovels have. When the H-D engineers designed the Twin Cams, they did so knowing these engines needed to be strong enough to easily handle the Screamin' Eagle big-bore and stroker kits that were to shortly follow.

Of course, there comes a point when increasing the stroke creates unwanted results, and that's what we'll cover in another issue.

See you on the road,

Chris Maida



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Three *Garage* Specials

AMERICAN IRON MAGAZINE WILL BE RELEASING three installments of its American Iron Magazine Garage specials for 2015. The first one is only a few days away, hitting news-



stands on April 7! Chock full of articles, exclusively concerning all things tech for the do-it-yourself Harley rider, the first *Garage* issue features, as always, only garage-built custom bikes by your average Joe along with maintenance and install pieces you can tackle in your garage. *AIG* specials are a newsstand-only publication, so check it out by

going to your local newsstand provider like Walmart or Barnes & Noble. Find out all the latest news about the upcoming issues of *Garage* at AIMag.com and via our Facebook page.



Victory Factory Racing

VICTORY MOTORcycles entered the world of NHRA (National Hot Rod Association) Pro Stock Motorcycle Drag Racing with the creation of Victory Factory Racing. Victory's effort will be led by twotime World Champion Matt Smith and his wife/co-rider Angie. NHRA racing allows fans to get close to the action and watch as the teams prep the bikes for the next run, and Victory will take part by hosting hospitality areas during the events. Learn more by going to VictoryMotorcycles.com.



Kickstart Classics <u>Update</u>

THIS YEAR, WE'RE GOING TO SPICE things up a bit by doing two Kickstart Classics! The 2015 kickoff rides will start and end each day (May 28-30) at the Wheels Through Time museum in Maggie Valley, North Carolina. There will be a reception dinner and party at the museum and various rides and events. The second ride will take place this summer in the lowa/Wisconsin area. Of course. participants can expect great roads, fun stops, and great people along the way. Registration is \$100 each for rider and passenger with limited registration, so get tickets now. All makes, models, and years of bikes are welcome, but riders of modern motorcycles are asked to ride at the back to pick up any parts that fall off the vintage bikes. Registration forms and information are available on American Iron Magazine's Facebook page and at AlMag.com.

H-D & Sturgis Sign 75-year Agreement

IN THE SPIRIT OF THIS YEAR'S 75TH STURGIS MOTORCYCLE RALLY, Harley-Davidson and Sturgis, North Dakota, city officials are finalizing a 75-year-long agreement, which will make The Motor Company the official motorcycle of the Sturgis Motorcycle Rally with an initial term and renewals up to and running through 2090. Harley-Davidson unveiled the deal by removing a brick from the historic factory entrance



using a 2015 Street 750. That brick, alongside a brick from the Harley-Davidson Museum, and 73 bricks from the headquarters' famous motorcycle-only parking area, will be delivered to Sturgis on Harleys where they will be integrated into a permanent plaza on Main Street in Sturgis. The year-round location, which will be completed in time for this year's 75th rally, will be the official Harley-Davidson destination. Remember, the Sturgis Motorcycle Rally is August 3-9. To learn more, go to H-D.com/Sturgis.

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AIM Glide

WE HAVE RECENTLY BEEN APPROACHED BY A well-known builder (who chooses to remain anonymous) to be part of a history-making, limited-production motorcycle. With next year marking the 80th anniversary of the Knucklehead engine, our builder has decided to create a model called the *American Iron Magazine* Glide, or *AIM* Glide for short, in honor of that momentous year.

Based on any of the three Street Glide models available in 2015, this new bike will be powered by a 122" engine (double that of 1936's 61") and will feature a Twin Cam front cylinder and a Knucklehead rear cylinder cast from an original 1936 factory mold, this Knuckle-Twin Cam combo

being the perfect rendition of *AIM*'s logo. Other specs include a patented, state-of-the-art paddle shift, eight-speed transmission, and a proprietary prototype self-parking feature, which, when activated, senses the bike's surroundings and then perfectly and safely parks the vehicle every time. Other new-to-market features are hands-free, biker-boot activated saddlebag lids, radar-based collision warning system, and an airbag bubble, which deploys around the bike and rider in the case of an imminent impact.

Currently, the concept is in the working prototype bar napkin phase. Only 80 bikes, serial numbered from FLHAX1936 to FLHAX2016, will be offered *AIM* readers for an expected delivery date of April 1, 2016. To secure your *AIM* Glide, you must e-mail AIMFLHAX@Gmail.com on or before April 1, 2015, for details on how to place a deposit.

2015 Buffalo Chip Challenge

NOW IN ITS FIFTH YEAR, THE 2015 BUFFALO CHIP Challenge, as part of the Buffalo Chip's Student Build Program at Sturgis Brown High School, will feature two



teams, one led by John Shope of Dirty Bird Concepts and the other by Paul Yaffe of Bagger Nation. For this year's challenge, the students will build a 2014 Indian Chieftain and a 2014 Harley-Davidson Road King. In addition to Shope and Yaffe, other celebrity builders will take part, including Dave Perewitz, Keith Terry, and Randy and Nick Cramer. The 2015

scholarship program, which is now open to all Black Hills High School students, will provide three lucky students with \$8,500 in scholarship funds. To learn more, go to BuffaloChip.com.



Spectro Sponsors Class of '79

FOR THE SECOND CONSECUTIVE YEAR, SPECTRO PERFORMANCE OILS WILL BE THE corporate sponsor for the AMA Pro Flat Track Rookie Class of '79 and Friends, an organization that raises funds for injured AMA Pro Flat Track riders and their families. The Rookie Class is dedicated to Wayne Rainey, Charlie Roberts, Tommy Duma, Ronnie Jones, Scott Parker, Jackie Mitchell, Lance Jones, and their friends. Find out more by going to AMAft79.com.

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Motorcycle Fatalities Drop

THE MOTORCYCLE Riders Foundation (MRF) recently revealed a study made by the National **Highway Traffic Safety** Administration (NHTSA), which shows a decline in motorcycle fatalities in 2013 from 4,986 to 4,668. This is the second year-onyear drop in motorcycle fatalities since 2009 and was the largest percentage of all vehicle groups at 6.4 percent. The number of alcohol-related deaths also dropped by 117 (8.3 percent) as well as the number of injured motorcyclists from 93,000 to 88,000 (5.4 percent). Unfortunately, motorcyclist fatalities now take up 14 percent of the total fatalities. The MRF believes that through strong rider education programs and awareness campaigns, this drop in motorcycle fatalities can continue. For more information, go to MRF.org.

Evel Knievel Thrill Show

EVEL KNIEVEL, THE UNDISPUTED KING OF STUNT SHOWMANSHIP, WILL be "resurrected" this August at the Sturgis Buffalo Chip during the Sturgis Motorcycle Rally. Designated as the Evel Knievel Thrill Show, the event will consist of both an exhibit

and an attempt at Evel's infamous failed jump. The exhibit, held in the Cross-Roads area from July 31 to August 8, will feature a large collection of Evel Knievel curiosities, including the Skycycle, X-rays of his numerous broken bones, the famous Sports Illustrated leathers and cape, and the Mack truck show rig Evel named Big Red. The entrance fee, paid in advance, is \$10. The big thrill, however, will take place on August 6, where Evel Knievel's



unsuccessful world-record, 22-car jump will be performed on the same bike, a 1972 Harley-Davidson XR750, by Doug Danger. The stunt will be held in the middle of the Sturgis Buffalo Chip amphitheater. To get tickets, go to BuffaloChip.com.



Bonhams Motorcycle Auction

CLASSIC MOTORCYCLES GALORE WERE SOLD and showcased at Bonhams' 2015 motorcycle auction in Las Vegas. One of the big purchases included Steve McQueen's formerly owned 1912 Harley-Davidson X8E Big Twin, which sold for \$117,300. McQueen's Indian Chief was also on display. Harley highlights include a 1938 EL Knucklehead, 1942 WLA, and 1964 FL Duo Glide Panhead. For Indians, the auction included a 1913 Indian Model E Twin and 1914 Indian Twin. A 1916 Excelsior Big X and 1924 Henderson Deluxe Four were also part of the auction. To view complete auction results, visit Bonhams.com/Vegas.

AMA Vintage Days

FOR 2015. THE AMERICAN MOTORcyclist Association's AMA Vintage Motorcycle Days will take place July 10–12 at the Mid–Ohio Sports Car Course in Lexington. Ohio. A fundraiser for the AMA Motorcycle Hall of Fame, Vintage Days features classic motorcycles of all makes and styles and honors the riders who made them famous with activities including the AMA Vintage Grand Championship, the American Motor Drome Wall of Death stunt shows, and more. AMA members who buy tickets directly from the AMA before May 29 will receive an exclusive price discount and not be charged a service fee. Children 12 and under get in free with paving, supervising adults. For more information, go to MotorcycleMuseum.org. AIM

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One of the Great Pleasures of Riding is rolling on some familiar stretch of curvy, twisty road. Whether it's a group of tight technical turns, long sweepers, or a combination of both,

the sensation of systematically leaning side to side with a flowing motion is a feeling that may be hard to describe unless you've been there. Words like *exhilarating* and *satisfying* come to mind, yet one word that should usually appear doesn't: *dangerous*. With a high percentage of single motorcycle crashes and fatalities occurring on curves, we need to always consider that what may bring us joy can quickly turn otherwise if not addressed properly.

The most basic of rider courses to the most advanced ones stress one key technique: look through the turn to where you want to be. As much as this is always emphasized, the mental process is sometimes hard to adopt. This is not a skill that can be taught, it needs to be developed over time to recognize the way to address those paved twists of paradise. Looking through the turn and not at it is the first step to conquering an unwanted risk. Using search, evaluate, execute (SEE) to distinguish the elements of the upcoming curve is vital. SEEing whether it is a constant, increasing, or decreasing radius is important, as is your ability to look through the turn, or not (such as a blind turn), to set yourself up for success.

As part of setting up, keep in mind that motorcyclists divide their lane into three portions. If you consider that there are three primary methods of addressing a turn, you can have a saddlebag load of options to safely and skillfully execute the rolling pavement. Proper lane setup along with speed adjustment can make it far easier to focus on other points. If you enter a radius too slow, you can always adjust your speed as needed, but entering too fast may cause unwelcomed complications.

Once you have your lane placement and speed adjusted for the curve ahead, don't stop SEEing; there are other

factors to consider. You may need to take into account crowned roads, sloped turns, intersecting roads, and other surroundings. As much as you are processing information for fine-tuning, keep in mind that you're a moving object and circumstances can change quickly.

So we've realized that there is a lot to look at and adjust

for without even entering the curve or considering what type of approach may work best. The three primary methods include the outside-insideoutside strategy, delayed apex path, and steady lane placement approaches. Outside means closest to the continuing arc of the turn. Outside-inside-outside is the technique taught in most basic classes. It's a route that makes the turn a little "straighter." Then there is the delayed apex path where you enter the curve a little farther on the outside portion and then lean sharper through the turn. This method may give you longer vision through the turn. Finally, there are the steady lane placement approaches, meaning staying constantly in the outside, middle, or inside portions of the lane through the turn. While each method can work, the ability to SEE what lies ahead is key for adjusting.

We also have to be aware of our skill level, the abilities of our motorcycle, and other conditions either before the curve or during it. Things such as road conditions (water, sand, or gravel, etc.), weather, and direction of travel. Riding into a sunset or sunrise can be blinding and hazardous in a turn, and these are all issues we have to think about. Furthermore, don't forget about that infamous oncoming traffic.

So now when you look at all the factors associated with rolling through those curves you can SEE that there is a definite need for constant adjustments and awareness to proficiently maneuver through them. Is there a best way to safely ride those twisty elements? Yes. Learn and practice them all. There are a lot of different venues to gain this knowledge and ability. Attending a riding course or multiple courses to learn how to competently tackle different methods of executing a curve will allow you the ability to adjust yourself and your machine to proficiently flow through, and stay ahead of, the curve. **AIM**



SEEing whether it's a constant, increasing, or decreasing radius is important, as is your ability to look through the turn, or not (such as a blind turn), to set yourself up for success





















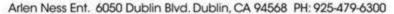




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Intent And Enhanced Penalties

WORKING IN THE REALM OF MOTORCYCLE safety, I hear a lot of horrible stories about motorcycle fatalities. Why is it that whenever someone finds out you ride a motorcycle he

immediately feels compelled to tell you "Oh, one of my (friends, cousins, etc... fill in the blank) was killed on a motorcycle"? I personally lost a younger brother to a vehicle crash in a GMC Jimmy, and I don't tell every one of my friends that owns sport utility vehicles how deadly they can be. It's also puzzling because there are over four times as many vehicle fatalities as motorcycle fatalities every year. Perception is reality, I suppose.

What offends me is not the negligent drivers that hit and kill motorcyclists, it's the lack of enhanced penalties offered to the court to punish negligent drivers.

I recently met a young woman at a motorcycle rights conference who approached me after my presentation and asked if I would speak to her riding group. We started talking and when the issue of what we rode came up, she mentioned she had a

little 250cc something or other and a high-powered sportbike that was in the shop. I asked what she could possibly be having done since that bike already had more than enough ponies. She told me that it was her fiancé's bike and that he had been killed on it while she was a passenger. They were T-boned by an older man in a pickup truck. She was left with a dead fiancé, and the driver got an \$85 ticket. Tragic. But it happens everyday.

Intent. It is how the court separates jail time from a fine. If you are trying to use your car, or motorcycle, as a weapon to intentionally hurt someone, you will likely be convicted of manslaughter. If you simply were not paying attention and you kill someone, you get a ticket. At least that's how it is in most states.

Sometimes it's obvious that the driver was drunk, ran a red light, was driving distracted, or another factor that can be classified as gross intent in the eyes of the court. How does the court determine if gross intent was committed? The action must "shock the conscience."



What offends me is not the negligent drivers that hit and kill motorcyclists, it's the lack of enhanced penalties offered to the court to punish negligent drivers

Some states have adopted enhanced penalties that allow judges to issue more than just points on a license and a small fine. In the case I spoke of above, maybe the older man shouldn't be jailed for the rest of his days, but maybe revoking his license would keep such an accident from happening again. Or maybe a few months in jail or a steep,

meaningful fine.

As some of the smallest vehicles on the road, we have a different risk profile than cagers; we all know that. But it doesn't mean that we should be treated as a moving violation if we meet our maker at the hands of a passenger vehicle.

A few years ago, former Governor of South Dakota Bill Janklow, then a sitting US Congressman, hit and instantly killed Randy Scott who was obeying the rules of the road while out for a cruise on a Saturday afternoon, Janklow insisted he tried to stop at the stop sign (Scott had no stop sign at the intersection). The courts pulled his black box data recorder and showed that not only was Janklow going 20 mph over the limit, he had never even tapped the brakes. And because of South Dakota's enhanced penalties, the judge could have sentenced Janklow to 10 years in jail. He got 100 days, of course. But

because of his negligence, he was charged with vehicular manslaughter.

That all happened in the criminal court. In order for the surviving family to obtain any financial settlement, they had to go to a separate civil court. Scott's family sued for \$25 million and settled for \$1 million. The kicker? Janklow was not personally responsible for the cash. Because he was on official business for the US government, he was protected from any lawsuit "when acting in a governmental capacity." Truth really is stranger than fiction.

The US government can be so messed up sometimes it makes your head spin. However, like I always say: it's not a perfect system, but it's still the best in the world.

Editor's note: Jeff is the VP of government relations for the MRF and serves as its lobbyist. He is responsible for informing and coordinating action with regard to legislation, executive action, or judicial decisions that affect motorcyclists on both state and national levels. Follow Jeff on Twitter @jeffrey hennie.

Summer Riding Protection - A Smart Idea STEALTH PROTECTION



BY KEN FREUND Popular long-time moto-journalist Ken Freund checks out the Bohn Bodyguard System

With summer coming,

we'll soon be faced with the usual dilemma of what to wear while riding in hot weather. Although I enjoy riding with my friends on their Harleys through the hills over to the coast on a hot day, I do get tired of being the butt of their jokes about me riding with full protective gear.

It's really tempting to ride wearing Tshirts and jeans like they do, especially around town, when temperatures are up around three digits.

I'm a safe rider with hundreds of thousands of riding miles behind me, but as I get older I don't think I'm invincible like we all did in our teenage years.

Don't get me wrong, I'm not some risk-averse pansy, but I was an EMT, and know what can happen to even the best riders.

We used to say "hope for the best, but prepare for the worst."

We've all heard the stories of animals running out in the road, fuel spills, sand, you name it. Today there are so many driver distractions, with seemingly everyone texting or talking on a cell phone. Even if you're the world's best rider, things sometimes go terribly wrong in a heartbeat. As a result, I just won't ride unprotected.



A Good Solution

I recently found out about Bohn's flexible hidden armor which can be worn beneath riding jerseys and jeans. After hearing about them from several riders I finally got some. They're even made here in the U.S. of A.! Bohn's Bodyguard System -armored undershirts and pants, combine comfort with protection and

The Invisible System Your Friends Are Using

they are cool. Now you can have smart and comfortable protection that looks casual.

Bohn Shirts include armor in the shoulders, plus arm/elbow and a flow-through back pad. Made from a mesh material like that of athletic jerseys, you can wear them as a lightweight jacket, or under your old favorite jacket. There's also a CoolAir Mesh option for extreme heat and humidity.

I'd also seen the ads and heard good things about **Bohn's Adventure Pants** - you wear them under your jeans. There's armor in all the places you might land on in a fall. I initially thought they'd be too hot in summer, but found them to be very breathable, so you'll hardly notice you have them on. You can also get these in CoolAir mesh if heat's your issue. These items are well made, should last for years, and are versatile. Washing's easy in a machine or sink. You can also get spare "shells" in mesh or heavier winter material. Sounds a great idea for tours and

vacations at under \$300 for a full set. A lot of sensible Harley riding women, riders and passengers, wear



The Bohn pants are easy to wear for everyday riding

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Give 'em a try

Ken Freund

PS: I meant to add that most people can't tell I'm even wearing this stuff!



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The Fastest Family On Two Wheels

MOTORCYCLING HISTORY IS BEING MADE BY A family from the small town of Mitchell, South Dakota. Known mainly for its famous Corn Palace, the 120-year-old event center, Mitchell is also home to KlockWerks Kustom Cycles, run by

Brian and Laura Klock.

Growing up in Wisconsin, Laura helped her dad and brother work on hot rods and loved anything to do with motorcycles, racing, cars, and even snowmobiles. She became a single mom when Erika was 6 and Karlee was 3, and both girls inherited her love of riding and started riding dirt bikes at an early age. Karlee was only 5 the first time she rode.

Laura met Brian Klock in 2003, in Milwaukee at Harley-Davidson's 100th anniversary celebration. The two clicked, and in 2005, Laura moved herself and her two girls from Wisconsin out to Mitchell to join Brian. A new family was created! Karlee and Erika continued to show an interest in riding and had encouragement from their family.

In 2006, Brian got the opportunity to build a custom bike for Discovery Channel's *Biker Build-Off* television series. During the process of building it, he decided it would be a great marketing idea to race it at the Bonneville Salt Flats! Since Harley-Davidson was just beginning to market directly to women, why not have Laura as the pilot? What started as a marketing idea would change their lives.

Making a name for herself in motorcycling, Laura set a world record on the Bonneville Salt Flats going 143.659 mph in 2006. That bike was known as the World's Fastest Bagger. In September 2006, Laura rode that bike to an AMA record of 153.592 mph in the MPS-PF 300 racing class. After riding on the salt, Laura felt confident that this might be something her daughters would be interested in. It seemed safer in many ways than other forms of racing: it's a more controlled atmosphere without other riders chasing you or riding too close. Though it takes courage, racing on the salt is more about the rider against the clock. Both Erika

and Karlee were eager to try it. All that's required to race at Bonneville is a valid, state-issued driver's license, a motorcycle that meets certain minimum safety requirements, and approved riding gear. This meant that for the 2007 Bonneville land speed record event, 16-year-old Erika could race since one only needs to be 14 years old to obtain a driver's license in South Dakota — which she did.

Karlee was too young and would have to wait another year before she had a license. Erika set her own land speed record. Karlee joined them in 2008, and at 14 years old, became the youngest to ever set a record on the salt. Laura, Erika, and Karlee became the first mother-daughter-daughter trio in the history of land speed racing to hold records at the same time. To date, their fastest times have been 195, 196, and 197!

Karlee, now 21, has been a busy girl. She works full time at the shop, and, in 2014, she launched her first design effort at the Tony Hawk's Stand Up For Skateparks event. She took a 2014 Bonneville T100 donated by Triumph Motorcycles and modified it with custom parts from KlockWerks and others. Building bikes seems to be in Karlee's future. After revealing its new 2015 Scout in Sturgis last year, Indian asked Karlee to be the first to customize the new model. The bike. which Karlee calls Outrider, debuted at the IMS show in New York City in December and was a big hit.

While Karlee is customizing motorcycles, 24-year-old Erika is one of the three co-founding members, facilitators, and incorporators of Helping With Horsepower, the program Laura envisioned to help young girls

struggling to overcome abuse. By coming together to rebuild a motorcycle, they also rebuild their lives. Besides being a National Land Speed Record holder alongside her mom and sister, she was a recipient of the Women's Spirit Award for her encouragement of other young ladies on the racetrack.

I'm so proud to call these strong women friends. They're great role models and an inspiration for younger women. Good luck on the salt, speed sisters ... and your mom, too!



Laura, Erika, and Karlee became the first motherdaughter-daughter trio in history of land speed racing to hold records at the same time



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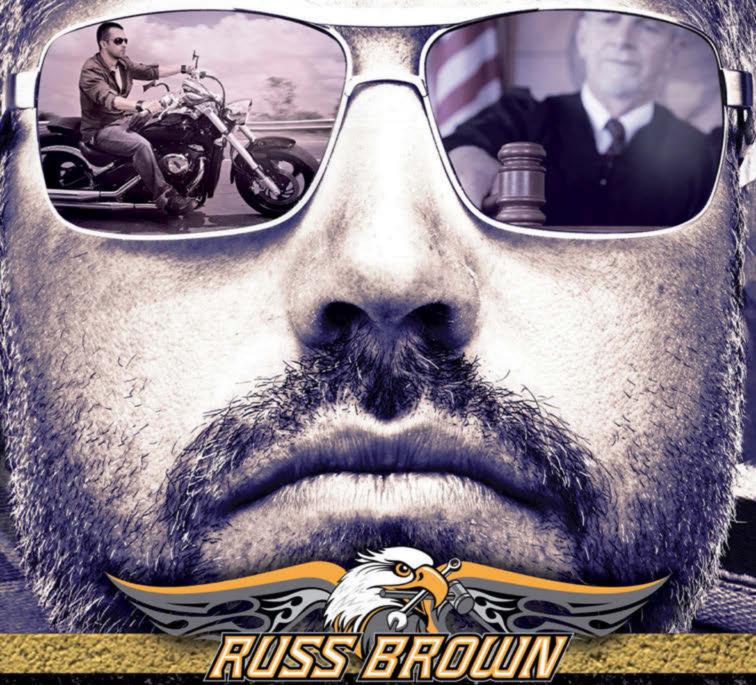
GOOD DEED Chris, I recently rode with approximately 80 Harley riders to bring 500 warm, thick blankets to a poor little pueblo called Zaragoza de Guadalupe. The pueblo is close to the ex-volcano Nevado de Toluca and is 8,800' above sea level, so it's bitterly cold at night, and winter is just starting. We're members of the Sangre De Cristo HOG chapter.

KLEMENS-HANS AND MONIKA WINDISCH Santa Fe. NM

KING FOR A REASON I purchased my 2009 FLHRC in 2011 from Great South Harley-Davidson in Newnan, Georgia. She features a Willy G theme, which looks awesome with the factory custom Light and Dark Candy Root Beer with gold metalflake paint scheme. I've also added Heritage bars to better accommodate my 6' 2" frame and preferred riding stance. The payment I make for her each month is the



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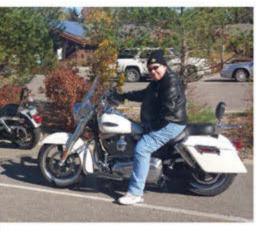
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only payment I've ever smiled about, month after month! Chris is right. They don't call 'em Road Kings for nothing! She is one sweet ride!

JAMES ELLIOTT

Via Internet

BROTHERS' RIDE I went on a ride with my brother Gary who lives in Florida and our "brother" Jason. We camped and rode in northern Minnesota when the leaves were still changing. It was a bit nippy. The temperature was around 50 F and was



especially cold for Gary, but he was a trooper and was right with us in the cool wind. We made memories for sure. On the way, we stopped at Itasca State Park in Park Rapids, Minnesota. Now I'm on my way to Florida for some seat time in the Sunshine State.

STEVE WERACE
Alexandria, MN

SNIPPETS ON PARKING I enjoy every page of every AIM issue. That said, Don Gomo's detailed article entitled Snippets in issue #318 about engine starting, stopping, and parking is way overboard and has holes. More importantly, it has nothing to do with common sense like he said, but simply assumptions and personal preference. The safer method is to back the bike into the spot with the engine on and in gear so you have additional power. Losing your footing is especially dangerous when trying to prevent a dead 800-pound bike from falling over, even more so if you're trying to keep it from hitting something next to you. Once in with kickstand down, it's not a control problem to switch the ignition off, instead of partial power off with the cutoff switch. Except for my first ride, I've never forgotten to keep the clutch

in, parking, or starting. I've had no problem even with apehangers. It's simple: clutch in, in gear, no complications, no engine restarts, no level or slope difference, and no searching for neutral with the engine off.

BILLY B

Via Internet

ADDED A NEW SLED! Chris, I wanted to take a moment and show you my latest Harley, a 2012 CVO! It's



my second Harley! Thanks to you and your mag, I can say I'm the proud owner of a CVO model, another one of my dream bikes! Thanks, again, for the great work!

TOBY LARKIN
Via Internet

AIM, MOTORCYCLE & AMERICAN PICKERS One of the Indians on the first page of Steven



Wyman-Blackburn's article about Indian's 2015 lineup caught my attention because it looked familiar (the older bike, not the new Scout). I thought I figured out where I saw it when your sister publication — Motorcycle, Rides & Culture — posted a photo on Facebook about Mr. Wyman-Blackburn's interview with Mike Wolfe of American Pickers in the Nov/Dec issue. I went back to issue #318 and thought I recognized this older Indian as the one



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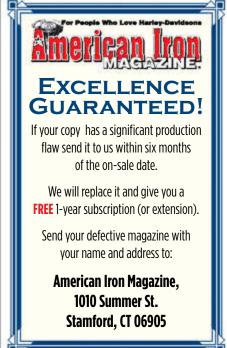
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Welcome *Motorcycle Bagger* Readers!



Mr. Wolfe and Frank had rebuilt and sold at Sturgis to the VPs at Indian. I don't remember the episode. All I can remember is the scene from American Pickers when someone puts the chrome face on the horn. The horn, I thought, was under the headlight. But in issue #318, it's on top, so it must be a different bike. Nice bike and a good article, though! Keeps me up to date on all American iron! Call me crazy, I don't get Motorcycle magazine.

BARRY SHAPIRO

Via Internet

TRI GLIDE MULLIGAN I just wanted to point out an error in issue #318 on page 64. The 2014-15 Tri



Glide Trikes don't come from the factory with a CB radio installed. A 40-watt CB would not be legal. The max power is 5 watts. I own a 2014 Tri Glide Ultra.

LEE

Via Internet

Lee, we know you're not mistaken about what you have on your trike. However, the official press release we got from The Motor Company that contains the information we printed has "40-watt CB radio and intercom system" in the audio system listing.

LESSON LEARNED Don Gomo's Snippets article on rider safety in issue #318 reminded me of an incident I had not too long after re-entering the riding world. I started small, working my way up the cc ladder, and thanks to a big surprise from the wife, I got a brand spankin' new Road King. I spent hours in parking lots practicing slow-speed drills until I felt comfortable. One day, I decided to make a coffee stop at one of my favorite diners in Ascutney, Vermont. As I rolled into the parking lot, I saw two wide-open parking spaces in front of the diner, overlooked by a huge picture window. I figured I could



pull a U-turn right into that space while amazing the entire crowd inside with my superior motorcycling skills. In I rode, executing a near-perfect, lock-to-lock, left-hand turn. I stopped exactly parallel to the white line on the pavement. Ignition off. I dropped my right foot and began to search for the kickstand with my left, but my right foot slowly slid away until the bike went down. As I stood there, a very elderly couple toddled cautiously beside me. After a pause that seemed to last forever, the lady finally turned to her husband and said "Harry, didn't they used to make motorcycles with kickstands?" He said, and I quote, "I imagine they would be quite useful." I never show off on a motorcycle anymore. Lesson learned.

> TIM BEEBE Henniker, NH

BETTER LATE THAN NEVER I just read your article entitled Celtic Cruiser about Tom Murphy's Irish bagger in issue #315. I know I'm a little behind,



but I just got back from an overseas deployment, and I love it! I wish I could've seen it at its debut in Laconia, seeing as I live 45 minutes away! As for myself, I have a ratty 1968 Ironhead and a 2003 Victory V92C that my wife bought for me while I was away. I haven't had the pleasure of riding my Vic yet, but I can't wait!

SEAN GILMARTIN
Via Internet

GAS TAX DISAGREEMENT While

I usually find Mr. Hennie's articles to be informative and useful, I must make an exception for the article in issue #318 entitled Increase the Highway User Fee! Mr. Hennie has resorted to doing what most politicians now do, and that is providing half of the truth and selected info. Mr. Hennie states that we need to increase highway fees (ie gas tax) to ensure roads that are safe. He also says that the current rate of 18.5 cents per gallon hasn't been raised since 1993 and is simply not enough to accomplish the task. Further, Mr. Hennie says the gas tax is under 5 percent per gallon in Washington, DC. Mr. Hennie fails to point out that every state adds a state tax also (that's 18 cents in Missouri making our gas tax 36.5 per gallon) while gas prices have dropped to less than \$2.25 per gallon. This makes our rate nearer to 16 percent, not 5 percent. By not mentioning the actual amount of tax per gallon, it brings into suspicion any and all numbers used by Mr. Hennie. As I understood from past articles, Mr. Hennie is a lobbyist for legislation concerning motorcyclist rights and safety. Is it possible that he should stick to

that and not worry about road tax?

WARREN MCDONALD Springfield, MO

DON'T SEND MONEY TO DC! I was on a

flight to Nashville when I read Jeff Hennie's article in issue #318. The article was about increasing the federal gas

tax. I'm sure the person sitting next me could see I was visibly upset as I read the article. Like most people, I enjoy riding my motorcycle on smooth, freshly paved asphalt, and I'm from Minnesota, so I've seen firsthand what can happen to bridges that aren't properly maintained. However, sending more money to Washington, DC is definitely not the answer. Anyone with access to the Internet can do a quick search and find over 387,000 web sites, articles, and books on the subject of wasteful spending in Washington, DC, ranging from the National Science Foundation spending \$856,000 to

teach mountain lions how to walk on treadmills to the National Institutes of Health funding a study to see if mothers love dogs as much as they love their kids. So until the wasteful spending stops, I'm opposed to sending these politicians any more of our hardearned money.

> **DAVID** Via Internet

PRICELESS Last Labor Day weekend, my two boys and I finally had the time to make a couple of day rides, some-



thing we had wanted to do for years! Unfortunately, both their metric bikes weren't running, so we decided to rent a couple of new ones. Pedro rented a Softail Heritage and JB went with a Road King. As for me, my 2005 FXDC never fails! We picked them up at Grizzly Harley-Davidson in Missoula, Montana, and then rode south, spending a cold, rainy night at a cabin in Twin Bridges. Saturday we spent most of the day touring Yellowstone National Park in the rain. By the time we reached Silver Gate Lodging, we had been riding in a mix of snow and rain, so a warm cabin, steak dinner, and a couple of beers were mighty welcome. Sunday we hit the Beartooth Mountains: snow and cold, but absolutely spectacular! We didn't hit sun until Red Lodge, and a fast ride home on Interstate-90 got the bikes back on time. It wasn't cheap, but memories like this with my sons are priceless!

JIM "RANGO" RUSSELL Florence, MT AIM





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INSURANCE ESSENTIALS

An insider's guide to the coverage you need

OO MANY RIDERS PUT MOTORCYCLE INSURANCE in the same category as fire extinguishers and first aid kits. You buy these things hoping you'll never need them, and then put them somewhere you can easily find them. Somewhere in your home you should have an insurance policy for your motorcycle. Please read your insurance policy after you read this article. You may be amazed to find exclusions you didn't know were there. There may be gaps in your coverage that could cost you a lot of money down the road. There are ways to pay less for insurance if you know what questions to ask your insurance agent.

Types Of Coverage

LET'S GET STARTED BY DEFINING SOME OF THE DIFFERENT types of coverage. Bodily injury liability insurance pays damages for injury or death because of an accident in which you were at fault. Property damage liability pays for damage to someone else's property in the event you were responsible for an accident. Collision insurance pays for damage to your motorcycle if you run into another vehicle or if another vehicle runs into your motorcycle. Comprehensive insurance pays for your losses due to incidents such as vandalism, theft, explosion, or other damage that did not occur as a result of a collision. Accessory coverage

When the unwanted happens is not the time to find out you don't have the right insurance coverage on your bike. You should have a basic understanding of what types of coverage are available, as well as what discounts you qualify for, before you send in the check.



applies to accessories that were added to the motorcycle after it left the factory. Saddlebags, windshield, luggage racks, and chrome pieces would generally be considered accessories for this type of coverage. Uninsured and underinsured motorist coverages are often lumped together in many descriptions of insurance coverage even though they cover two different types of incidents. Uninsured motorist coverage pays your medical expenses if you're riding your motorcycle and are struck by someone who has no insurance. Underinsured motorist coverage pays your medical expenses if you're riding your motorcycle, and you're hit by a motorist who does not have enough bodily injury coverage insurance on his vehicle to pay your medical expenses. Medical payment (often called Medpay) is sometimes referred to as no-fault, or personal injury protection, and pays medical expenses for the rider and the passenger injured in a motorcycle accident. One of the lesser known types of insurance coverage is called gap insurance, and it pays the difference between what a motorcycle is worth when it's stolen, or damaged beyond repair, and the amount the owner still owes on a loan.

How Much Insurance?

HOW MUCH INSURANCE SHOULD YOU have on your motorcycle? This is one subject where insurance companies and personal injury lawyers agree: buy as much insurance as you can comfortably afford. Ask your insurance agent plenty of questions regarding coverage versus cost. Compare policies from different insurance companies, but make sure the coverages are identical when you do the comparisons. Some insurance companies don't provide all types of coverage in all states.



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How much does motorcycle insurance cost? Many insurance companies use what is called a risk assessment index (RAI). Each policyholder has a RAI based on a number of criteria: how old is the rider? Does the rider have a clean driving and riding record? What type of bike is the policy for? How many miles per year will the bike be ridden? Is the rider married? Where does the rider live? Will the bike be parked in a garage or on the street? Is the bike stock or customized? What is the rider's credit rating?

Can riders qualify for discounts on motorcycle insurance? The answer is: maybe. If a policy holder has car insurance or homeowners' insurance with the same insurance company, there may be a small discount available. Within recent years, some insurance companies offer a small discount to customers who have successfully taken a safe riding class. Anti-lock brakes (ABS) may get you a small discount from some insurance companies. Security systems that are a permanent part of the motorcycle may also qualify the rider for a small discount on the comprehensive insurance portion of the policy. Paying the insurance bill promptly may also save you a few dollars a year because it saves the company the effort and expense of sending out multiple renewal notices. Full time students who maintain a GPA above 3.0 may qualify for a good student discount from some insurance companies.

One source of a small discount offered by some insurance companies is the affinity group discount. Some insurance companies offer a small discount to members of groups like the American Motorcyclist Association or the Harley Owners Group. An astute insurance agent can confirm whether or not a group is recognized by the insurance company and how much the discount is. For example, the alumni association at my alma mater is recognized by the company I buy my motorcycle insurance policy from as an affinity group. The alumni association tells its members where they can save money on insurance. The insurance company gains a large number of prospective customers who are all college-educated. Every graduate gains an opportunity to save a few dollars on insurance.

Different insurance companies may or may not offer certain discounts. For example, the company I insure my bike with doesn't offer a discount for passing a safe riding class.

Declarations

AN IMPORTANT PART OF EVERY INSURANCE policy is the declarations page, which is sometimes referred to as a dec sheet. The dec sheet has the name of the insurance company on it along with the name of the insurance agent, the policy number, and the period of time when the policy is valid. The dec sheet may contain a table that lists the type of coverage, the maximum amount of money the policy will pay for a claim, and the cost of each type of coverage. The dec sheet

| nicle Insurance Coverage | Limits of Liability | Premium |
|--|---------------------------|----------|
| dily Injury/Property Damage ssenger Liability | \$500,000 each accident | \$63 |
| insured Motorist | \$500,000 each person | |
| | \$500,000 each accident | \$79 |
| derinsured Motorist | \$500,000 each person | |
| | \$500,000 each accident | \$60 |
| ision | ACV less \$200 deductible | \$72 |
| prehensive | ACV less \$200 deductible | \$13 |
| ional Equipment | ACV not to exceed \$3,500 | Included |
| ing/Roadside Assistance | Reasonable Expense | \$10 |

This table lists the type of insurance, the coverage, and the premium for what is called a single limit policy. It indicates the deductible for collision and comprehensive as ACV.

INSURANCE AGENCIES

MOST INSURANCE AGENCIES

fall into one of two designations: independent agencies and captive agencies. Independent agencies sell insurance from a number of different insurance companies, so they can pick which company writes policies that best suit the needs of a customer. Captive agencies sell insurance from one large insurance company and its subsidiaries. If a customer needs a policy that is not generally sold by the large insurance company, there may be coverage available from a subsidiary company.

also includes the name, address, birthdate, and the driver's license number of the person named as the policy holder. The motorcycle being insured is described with its make, model, vehicle identification number, and engine size in cubic centimeters.

Table 1 lists the type of insurance, the coverage, and the premium for what is called a single limit policy. The limits of liability are described as \$500,000 each accident. Some insurance companies offer what is called a split limit policy. If you hear someone refer to the liability portion of an insurance policy with numbers like, 100/300/100, those numbers represent thousands of dollars of coverage. The first 100 means that if one person is injured in an accident, the policy will pay up to \$100,000 in medical expenses for that person. The 300 means that if more than one person is injured in an accident, a maximum of \$300,000 is available for the medical expenses of all the people who were injured in one accident. The last 100 means that a maximum of \$100,000 is available from the policy to pay for property damage resulting from one accident. Is a single limit policy better than a split limit policy? Under some circumstances, a single limit policy may be preferable to a split limit policy. Well-informed insurance customers should ask their insurance agent which type of policy best suits their needs. The dec sheet shown in table one indicates the deductible for collision and comprehensive as ACV less \$200. ACV means actual cash value. As a rule, low deductibles mean a higher premium, and higher deductibles results in a lower premium.

The dec sheet might also list any discounts or surcharges that were applied



to the premium. Table 2 lists typical discounts that some insurance companies may offer. The affinity group discount is a benefit of being a member of an affinity group recognized by the insurance company. The renewal premium discount is a small reward for having been a loyal customer for a number of years. The multipolicy discount saves a few dollars for policy holders who also have other vehicles insured with the same company. The preferred operator discount results from being accident-free and claim-free during the previous years.

Table 2 doesn't list any surcharges on this policy. Insurance companies sometimes impose surcharges on high-performance sportbikes. Young riders may face a surcharge because they are re-

| Affinity Group Discount | \$10 |
|-----------------------------|------|
| Renewal Premium Discount | \$15 |
| Multipolicy Discount | \$19 |
| Preferred Operator Discount | \$26 |

The affinity group discount is a benefit of being a member of a group recognized by the insurance company, such as the AMA or HOG.

garded as high-risk riders until they gain some experience and maturity.

Claims

WHOSE INSURANCE COMPANY SHOULD you file a claim with after you've been involved in an accident? If you caused the accident, you will be filing a claim with your insurance company. If someone else caused the accident, you could file a claim with his insurance company or your insurance company. How do you decide which company should pay? If you are an accident victim and the person who caused the accident has inadequate insurance or no insurance, file your claim with your insurance company. Your insurance company may pay all or part of your claim and seek reimbursement from the person who caused the accident and his insurance company through a process called subrogation.

If your injuries are serious and there is substantial damage to your bike, and

the person who caused the accident has sufficient insurance, you might consider filing your claim with the other person's insurance company. In a situation like this, consult with your insurance agent and get an attorney's opinion before deciding which insurance company to file your claim with.

Settling an insurance claim may be challenging. Insurance companies make a profit by paying out less money than they collect in premiums. Insurance company employees are trained to save their employer money. An accident victim may get a phone call from an insurance company employee who needs to ask some questions so a claim can be expedited. This employee may ask your permission to record the conversation. Don't fall for this ruse. The insurance company is looking for information it can use to reduce the size of your claim. A question like "Did you see the other vehicle approaching the intersection?" has no correct answer. If the accident victim answers no, the insurance company may claim the victim wasn't paying attention to traffic. If the victim answers yes, the victim may be blamed for not taking action to avoid the collision. The best course of action may be to tell the caller that you are not prepared to make a statement at this time. Insurance companies often use comparative negligence to reduce the amount of money they pay accident victims. What this means is that if an insurance company regards the victim as 20 percent at fault for the accident, the size of the claim can be reduced by 20 percent. Some jurisdictions also allow the use of contributory negligence to reduce or disqualify claims. Suppose a rider was speeding at the time of an accident. The accident may have been caused by someone else, but the rider contributed to the severity of his own injuries by his own decision to speed. In situations like this, the rider may get nothing from the insurance company.

A few insurance companies advertise that most claims are settled within 48 hours. You may not want to settle that soon because there may be medical complications or motorcycle repair costs that exceed the original estimates. Insurance company representatives may come to your home or hospital room to have you sign some forms. Be extremely cautious about what you say and what you sign. Insurance company representatives may ask you to sign a release. A release is a legally binding contract that states all obligations past, present, and future regard-

A BIT OF ADVICE

NEVER BUY INSURANCE FOR A motorcycle you don't own. Let's say your teenage nephew just bought a metric superbike that's capable of 0-100 mph in 11 seconds. The challenge is that he can't get insurance because of his age and the bike's performance. Don't buy insurance for his bike in your name. A few companies will research the bike's VIN and realize you don't own it, then refuse to write the policy. Even if you do get insurance on a bike you don't own, the insurance company may cite misrepresentation as a reason to deny a claim.

ing one particular accident have been fulfilled. Accepting a settlement and signing the release means that if the damage to your bike is greater than originally thought, or the healing process is longer than expected, you don't get any more money from the insurance company. If insurance company representatives urge you to sign any documents, just tell them you need to have them reviewed by your attorney before you sign them.

Specialty Insurance

ONE TOPIC THAT OFTEN COMES UP WHEN riders talk about insurance is coverage for choppers, custom bikes, and vintage bikes. Specialty vehicle insurance is available for motorcycles in these three categories, but you may need to shop around to find adequate coverage at affordable rates. Insurance companies often want to know what is being insured before they will issue a policy. Don't be surprised if the insurance company wants photos of the bike or a qualified appraisal before a policy can be issued.

Cover Your Assets

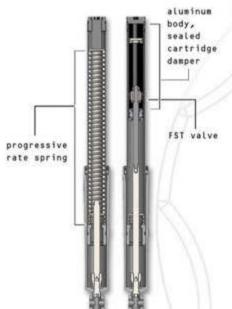
READERS WITH SOME CHROME IN THEIR hair or whiskers may remember the Bob Dylan song with the lyrics "When you ain't got nothing, you got nothing to lose." Let's assume you do have something you don't want to lose. The equity in your home, the value of your vehicles, and your life savings can be taken from you if you don't have enough liability insurance to cover a catastrophic loss if you cause an accident.

Suppose you have insurance that will pay one injured person's medical ex-

continued on page 149



New asymmetrical design places a progressive rate spring in one leg and an aluminum body, sealed cartridge damper with our (FST) Frequency Sensing Technology on the other. The result is superior damping and ride control as well as a new benchmark for high performance suspension on the HD Touring platform.





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Ironhead Repair

Part II: Lapping valves, multiangle valve jobs, and porting

Valve seats, if cut at one angle only as described in the early-Sportster instructions, give poor airflow results compared with the standard three-angle valve cut recommended in later Sportster, Evolution, and Twin Cam specifications, which produce a satisfactory production motorcycle outcome.

APPING IS AN ABRASIVE PROCEDURE TO FULLY match the valve-to-valve seat contact patch to ensure no leakage. If the valve seat and valve cutting is done professionally, there will not be much lapping required. H-D recommends using its Valve Lapping Tool (#HD-96550-36). Another less expensive way is to use a length of oil hose about 8"-10" long that will fit snugly over the valve stem. Insert the valve with fine lapping compound on its valve contact face into its valve guide. Put the hose over the end of the exposed valve stem. Rotate the hose between the palms of both hands, ensuring the valve face is in contact with its valve seat. I use a sucker stick that looks like a miniature toilet plunger. Insert the valve with fine lapping compound on its valve contact face into its valve guide. Attach the suction cup end of the sucker stick onto the underside of the valve, combustion chamber side. Rotate the stick portion between the palms of both hands, ensuring the valve face is in contact with its valve seat. With whatever tool chosen, oscillate a few times, then lift or push the valve off its seat, rotate the valve about 1/3 turn and repeat until there is a smooth continuous contact lapped patch on both the valve face and the valve seat. The area that is properly lapped will have a smooth matte finish. If you cannot get a smooth continuous contact lapped patch on both the valve face and the valve seat, the grinding procedure was not done correctly and regrinding will be necessary. Once the lapping process is completed, wipe away all lapping compound and discard the rag used. I wipe all the parts thoroughly, wash and scrub with solvent, blow dry, and wipe dry with a fresh cloth. The only thing that will destroy an engine faster than running it with no oil is this abrasive lapping compound getting mixed in with the engine oil.



I PARTIALLY AGREE WITH THE PREVIOUSLY described (AIM #321) methodologies of cutting valves and valve seats, especially the more sophisticated approaches found in later model H-D manuals. However, even these can be tailored to a rider's wants and needs such as longtime cruising before rebuild or a performance valve and valve seat cutting.

Cutting valve seats at their interface with the valves is extremely important, both for sealing the combustion chamber and also for airflow. An increase in airflow into and out of the combustion chamber dramatically improves with some quality work within 1/2" of the valve seat. This is where the majority of flow improvement will come from: increased airflow equals increased volume of air-fuel mixture, which results in an increase in performance and efficiency. Compare this with only a potential 1 percent improvement by porting and polishing the inside of the intake manifold to a lustrous shine.

Porting is the reshaping of the intake and exhaust tracts to encourage more airflow. Valve guides that stick down





into the port also need addressing. I do this in a variety of ways, such as beveling the guide itself so that a pointed, as opposed to a rounded, edge meets the incoming air. In some situations, a rounded guide works well also. Shaped similarly is the cast iron port material as it approaches the guide. This is all about easing impediments to the flow of air through the head and is not work for amateurs. It is also not work for many mechanics. A Sportster's intake and exhaust port tracts are already large enough. I never increase their size on stock models. These heads adapt well to more cubic inches though the longevity of the engine does not.

One of the principal areas to address when porting heads is an overhang or underhang of the valve seat relative to the head port. Valve seats press-fit into the cast iron heads. A very hard steel alloy should be used to withstand returning slam from the valves on 1980 and later Sportsters. Earlier model Sportsters used softer metal valve seats in combination with leaded gasoline that cushioned valve face-to-valve seat slam. For an optimal flow of air, the valve seat should radius and blend into the port it serves. Porting and polishing is much more than removing port obstructions and port reconfiguring. Cutting the valve seat is the most important aspect of increasing flow in a head. Valve seat fitment relative to the combustion chamber on one side and its relationship to the port on the inside is crucial to maximum flow.

Valve seats, if cut at one angle only as described in the early Sportster instructions, give demonstrably poor airflow results compared with the standard three-angle valve cut recommended in later Sportster, Evolution, and Twin

I bevel the part of the valve guide that sticks down into the port so a pointed, not a rounded, edge (shown) meets the incoming air.



Cam specifications, which produce a satisfactory production motorcycle outcome. The sophisticated five-angle seat cuts produce far better airflow increases. If a seven-angle cut is attainable, this will give the best results.

The adjacent cuts to the head's valve seat will be at 31 degrees and 60 degrees, which produces the three-angle cut. With these two contiguous cuts, the mechanic can determine the width of the actual valve-to-seat area. Cutting the neighboring 31-degree and 60-degree valve seat cuts deeper will narrow the interference fit 45/46-degree center contact patch. Cutting the adjacent 31-degree and 60-degree valve seat cuts lighter will

allow a wider 45/46-degree center contact. Cutting the 45/46-degree center contact cut deeper will widen it.

The seat contact area can move out or in by deepening one adjacent cut relative to the narrowing of the other to place it where desirable on the valve face. Placing the valve contact position at the optimal seat contact location will increase airflow. There's no set placement as port design and combustion chamber shape, along with valve head size, all combine to determine the location of the optimal valve-to-seat contact on the rounding radius of the valve seat. Best performance results with the contact patch broaching the edge of the valve face. However, longevity before recuts is reduced because of heat exposure. I agree with H-D's specification of two-thirds of the way towards the edge of the valve face for a reliable, so-so performance contact patch location.

Generally, for best flow, place the seating area close to the rim of the valve. However, do not put the seat right at the rim, as this will lead to a premature burning of the contact area from the searing heat of the combustion event. This 45/46-degree center contact cut is very important as a wide contact area will last longer before recutting is again

VALVE HEAD TO GUIDE CLEARANCE

THIS INFORMATION IS NOT FOUND IN THE EARLY XL MANUALS, HOW-

ever, it is very important for all model Harley-Davidsons. As the valve's head narrows to the valve stem, its positioning relative to the bottom end of the valve guide is crucial. Only the constant diameter stem portion of the valve stem may come anywhere close to the valve guide end. The wider portion, as the stem begins to burgeon out cannot enter into the valve guide opening. The valve head's stem will stick in the inner bore of the valve guide with dire consequences. This process is easy enough to determine by eye and feel. A simple hand-grinding tool will perform this function.



required but will not flow as much air as a narrower cut. A very thin contact area will produce the most flow but may not have satisfactory longevity before a rebuild is necessary. Very narrow cuts have use only on a race bike. Therefore, on a street bike we need a compromise valve-to-valve seat contact area both to ensure good airflow and engine longevity, although the choice is up to the rider after consulting with the mechanic. I place my seat cuts about threequarters of the way towards the edge of the valve face and reduce the contact patch width from the H-D recommended 0.050" width to a 0.030" performance width or a 0.040" touring width, depending on my needs and wants for that particular motorcycle. A race bike will like an even narrower width with extra rounding of the valve seat with extra cuts.

A five-angle valve seat cut adds additional 15-degree and 75-degree cuts. When looking at the seat from one side to the other, the cuts will be in the following sequence: 15, 31, 45, 60, and 75 degrees. If looking at the seat from the opposite side, the figures reverse, of course. Extra cuts do not affect longevity at all and will increase efficiency with performance as a byproduct.

The seven-angle cut will add two cuts, one at either end, say at 7 degrees and 82 degrees, further rounding the seat. The thinking mechanic will decide on the angles for these two cuts depending on the contour of the head port approaching the seat and the contour of the combustion chamber moving away from the other side of the valve seat. The key word here is rounding. A rounded valve seat promotes the easiest flow of air by removing impediments to the volume and velocity of air flow. In other words, increasing efficiency is the desired result.

XR-1000

DURING ASSEMBLY, XR-1000 ROCKER arms must be assembled in their correct positions; they are not interchangeable. H-D has splotch color-coded them as follows: front intake is red; front exhaust is white; rear intake is blue; and rear exhaust is yellow. The XR-1000 rocker arms use bearings as opposed to Ironhead and XL Evolution versions, which use bushings. Bearings offer less friction and thus more efficiency.

The valve guide press fitment into the aluminum head has a minimum interference fit of 0.0014". A loose valve guide will cause catastrophic destruction in the top end, just as it would in an Ironhead or any overhead valve engine. Too tight a fit will squeeze the valve guide, reduc-

ing the valve stem-to-inner valve guide fitment resulting in heat seizure, which will also cause much damage. The valve guides are dot color-coded for oversized specification: a 0.002"-over standard outer diameter guide is white; a 0.004"over standard outer diameter guide is yellow; a 0.006"-over standard outer diameter guide is green; a 0.008"-over standard outer diameter guide is blue; and a 0.010"-over standard outer diameter guide is black. The XR-1000 is a performance bike. I would be checking mating component parts, like valve seats, if the rebuild requires a large oversize like 0.010". Of course, we always do this, no matter the bike or model, don't we?

The intake valve stem-to-valve guide clearance is always tighter than the exhaust valve and guide clearances because of less heat. The incoming air and fuel mixture has a cooling effect on the valve whereas the hot exhaust gasses exiting the exhaust valve heat up the valve and guide requiring more clearance due to greater heat expansion. Intake valve clearance is 0.001"-0.0025", with replacement required at 0.006". I replace at a 0.004" wear clearance. Exhaust valve clearance is 0.0015"-0.003" with replacement required at 0.007". I replace at a 0.0045" wear clearance.

Always reface a valve seat and valve if disassembled for any reason. Pitting, wear, and burning are the enemies of a good seal. Ensure the valve seat contact area is not too deep. The top of the valve to the valve guide shoulder fitment into the head is 1.654"-1.700". H-D tool #96489-63 will accurately determine this for the mechanic, but so will a vernier caliper. The manual recommends the use of a Neway valve seat cutter to cut the seats. Another way is with grinding stones from companies like Kwik Way. The procedure is the same as with the Ironhead instructions already given except that the undercut angle to raise a seat is 52 degrees. The overcut angle to lower a seat is now 40 degrees. Again, H-D recommends a seat width of 0.060". In my (strong) opinion, this is too wide for a performance application. I use 0.030". Always use new valve guide seals. Don't be cheap or lazy.

Conclusion

Next month we'll look at Victory.

DONNY PETERSEN DonnyPetersen.com

VALVE SEATS & OCTANES

VERY EARLY SPORTSTERS DO NOT HAVE VALVE SEAT INSERTS. THE

seats are cut into the cast iron head. However, H-D began using replaceable valve seat inserts after a few years. The 1970-85 intake valve seat insert is #18055-70. The exhaust valve seat insert is #18052-58, but no part number is given for 1979-85. There should be listings for harder valve seats circa 1980 for use with unleaded gasoline. I use the harder unleaded gas aftermarket valve seats in all Sportster rebuilds no matter what the year head to increase valve seat life. Corresponding harder valve face valves are necessary to run with the unleaded gas valve seats.

Lead, when used as an octane additive, is very dirty and causes mental retardation in children. However, it's an excellent octane producing a predictable rate of burn. It also acts as a cushion for the valve seat when the valve forcefully returns to its seat thousands of times per minute (rpm). Unleaded gasoline uses different octanes to produce a consistent fuel burn that allows exact ignition timing. However, there is no valve slam cushion effect with these octanes. Therefore, valve faces and seats must be much harder to withstand their constant slamming together when not using lead as an octane additive. Leaded gas valve seats and valve faces are made from a softer metal.



For Strength, Performance & Beauty - There's Nothing Like a Hannigan!

In-Line Drive - Over 4" of Suspension Travel - Wide Track - Artistic Body Lines





EW YORK CITY IRONWORKER JOE PREVETE found inspiration for his primer red custom in the world of automotive hot rods — specifically the four-wheeled rat rods that have become such crowd pleasers at hot rod events. In short, rat rods, which began as a grassroots enthusiasts' movement, represent a revolt against the high-dollar, trailer-queen billet buckets that have invaded hot

rodding. Rat rods are characterized by their light weight and raw appearance, both made possible by the absence of fenders, hoods, conventional upholstery, fancy paint, and other don't-really-need-it parts. They have a performance-oriented drive-train based more on tradition than technology and the occasional exaggerated styling gimmick. They are also affordable to build, albeit far from ideal distance cruisers due to the lack of creature comforts and concessions to practicality.





AlMag.com

Though a man of many talents himself, Joe knew he'd need help to turn the nice, but nothing special, rigid-framed Evo he was riding into the rat rod — or rather rat ride, in the case of motorcycles — he wanted, as opposed to the rolling junkyard rat bikes that were semipopular at one time. Enter friend and fellow ironworker Billy Millington, a skilled welder with extensive fabrication experience. The friendship became a partnership, with Joe providing sketches to clarify his ideas, along with the occasional handful of parts he thought might work. Billy provided the skills and experience. Despite the bike's raw, in-your-face appearance, the fine points of their combined efforts are surprisingly subtle. Glancing back and forth between the leaf-spring fork, Frisco-mounted tank, and shoulder-high cue ball shift knob, admirers typically miss the details that reflect the thought and effort behind Joe's ride. But let's start with the obvious and go from there.



The fork began with the rear half of a Paughco springer Joe happened across. As the rat ride evolved in his mind, he realized that a leaf-spring fork would be the perfect front end, and his springer remnant the perfect foundation for one. Needing only a spring assembly and Billy's talent to mate it with the springer half, he scoured home-base Long Island junkyards for an assembly with the right arc, one that would parallel the radius of a chunky 16" Metzeler when the time came. Springs salvaged from a Dodge Durango came close, but weren't quite perfect until Joe had them rearced at a shop that specializes in such things. Nothing like living by the Big Apple, I guess. Moving on, the tank, which one might easily dismiss as a shelf-model aftermarket item, came from a Pro Streeter of some sort. To get the long, skinny look that Joe wanted, Billy narrowed it 8" and shortened it



6". Joe sanded the tank sides to enhance the raw look then clearcoated them to prevent rust. The long, scimitar-shaped shifter lever beside the revamped tank started as a wooden mockup that Joe created; it was plasma-cut from steel and, with Billy's help, drilled and detailed.

Though not nearly as obvious, the small parts are equally well-crafted. The handlebars, as you can see, have no risers

because Billy welded the bars directly to the fork. Though probably not ideal for an overnight sprint to Miami, they give Joe the "gangster lean" rider profile he wanted for cruising Long Island: butt

arms reaching straight out to those tricky bars. Using bits and pieces from a big-block Chevy header, Billy also welded up the "ratrodesque" exhaust system. The frame he crafted is equally unique because he tailored it to Joe's build and desired riding position. We mentioned that Joe wanted the gangster lean. Since his T-shirts are an X or two past large, making room for him on a ground-hugging rigid was Billy's biggest challenge. Putting their heads together, the two decided to stretch the rear section 6", mount the oil tank behind the transmission, and drop the top of

the vertical frame member behind the engine 4" before adding the rear section. Yowzah! Problem solved. The oil tank, by the way, gets support from three reshaped box-end wrenches. The battery behind it drops out through the bottom of the frame come maintenance time, making access easy despite the cramped quarters. Hmmm ... what's that word? Oh yeah, cool, much like

the seat suspension system the two came up with.

For upholstery,
Joe handed the pan off to Nick

Grimaldi, saying "Cover it in something weathered looking and give it a little foam ... but just a little."

Learning how Joe and Billy think and what they're capable of, I wish I had them kibitzing beside me while I put my own rigid together. But you can bet I'd have kept Joe busy. When asked

about the bike's name, Southpaw,
Joe explained that he'd gotten
bored one day and decided to put

the throttle on the left handlebar and the clutch lever on the right. More power to him, but I wouldn't last two blocks with that setup! **AIM**

TECH SHEET

low, feet forward,

Owner: Joe Prevete, Port Jefferson, NY

Builders: Joe Prevete and Billy Millington, Speedmill Customs,

Shirley, NY

Year/model: 2006 Custom

Painter: Speedmill Customs, Shirley, NY

Color: Rust-Oleum primer

POWERPLANT

Engine: 2006 Harley-Davidson Evolution **Builder:** Long Island Choppers, Freeport, NY

Horsepower: 90 plus

Cylinders: Stock, 0.010"-over Pistons: Wiseco 10:1

Heads: Stock, ported by Long Island Choppers

Cam: Andrews Products EV59

Valves: Stock
Rockers: Stock

Litteres Charles

Lifters: Stock

Pushrods: Andrews Products

Carb: Mikuni

Air cleaner: Moroso, modified by Speedmill Customs

Exhaust: Speedmill Customs

Ignition: ACCEL

Coils: ACCEL

Wires: ACCEL

Charging system: Stock

Cam cover: Stock

Transmission: Trik Shift six-speed

Case: Trik Shift
Gears: Trik Shift

Primary drive: BDL belt Final drive: Chain

CHASSIS

Frame: Speedmill Customs

Rake: 30 degrees
Stretch: 6" rear

Front forks: Speedmill Customs

Mods: 1998 Dodge Durango leaf springs

Front wheel: DNA Specialty 3.50-16" Rear wheel: DNA Specialty 3.50-16"

Front brake: Performance Machine two-piston caliper **Rear brake:** Performance Machine four-piston caliper

Front tire: Metzeler 150-16"
Rear tire: Metzeler 160-16"
Rear fender: Speedmill Customs

Fender struts: Speedmill Customs

ACCESSORIES

Headlight: eBay

Taillight: Model A Ford replica
Fuel tank: Speedmill Customs
Oil tank: Speedmill Customs
Handlebars: Speedmill Customs

Seat pan: Speedmill Customs
Upholstery: Nick Grimaldi, Glen Cove, NY

Pegs: Speedmill Customs
License bracket: Speedmill Customs

Hand controls: eBay, left-hand throttle, right-hand clutch

Foot controls: Speedmill Customs

2015 H-D Street Glide Special

Well, isn't this special?



HERE'S A REASON WHY HARLEY'S FLHXS STREET Glide has been its top-selling model for the past few years. The bike looks so cool. You might say that — to paraphrase a popular contemporary rock song — the Street Glide has "moves like Jagger." Check it out: slammed suspension, a chopped and tinted windshield, stylish fender fillers with dedicated antenna holes, dechromed accessories to match the bike's paint, gloss black inner fairing, tucked-in mirrors, molded-in taillight, stylish Streamliner footboards and controls, 19" Enforcer front wheel with matching 16" rear hoop, and an onboard infotainment center with a 4.3" touchscreen, Bluetooth, and a 25-per-channel amplifier feeding four speakers. Go, Jagger.

So how do you improve on something so cool? Well, you make it cooler, or in this case, you make it Special, as in FLHXS Street Glide Special, a model that joined the FLHX in Harley's Touring lineup for 2014.

At a glance, or to the untrained eye, the FLHXS and FLHX look pretty much the same. Both ride on the







RUSHMORE-based fork touting 49mm-diameter legs with 4.6" of front wheel travel. Both Street Glide models have shortened rear suspension (as compared to the longer suspenders found on Electra Glide Ultras), but the Special's mechanically controlled rear shocks have ever so slightly more travel than

the 2.1" found with the FLHX's air shocks. Seat height, though, remains the same for both of these stylish baggers at a claimed 26.1" when laden with a 180-pound rider.

Where's the difference, other than MSRPs that begin at \$20,599 for the FLHX and \$22,899 for the FLHXS (Vivid Black versions of either model)? Well, start with the infotainment center, which features a 6-1/2" touchscreen on the FLHXS compared to the FLHX's standard-size 4.3" screen. The Special's rear suspension includes a pair of Premium Ride shocks that have mechanical adjustment to help you set spring and damping rates to your riding style, and Reflex Linked Brakes with ABS and Smart Security System with hands-free fob are standard, too.

The bikes' commonality, beyond shared cool looks, is a bagger package that offers rather snappy steering response for an otherwise long-haul motorcycle. No, you won't be diving into turns like you would on a lightweight sportbike, but both Street Glides are surprisingly responsive to rider input, especially for 775-pound (claimed dry weight) motorcycles. It helps that there's no top-heavy Tour-Pak over the rear fender to shift weight up high, and the shortened suspension and scalloped seat actually help

lower the bike's overall center of gravity. You're rewarded with easier turn-in for corners, and the bike itself feels more flickable than the higher-riding Electra Glide Ultras.

But there's always a price to pay, and, in the case of either Street Glide, you'll pay the piper in terms of a slightly harsher ride than what's found on the high-riding Electra Glide models. The Special's adjustable rear suspension — accessed by removing the left saddlebag and twisting the knob clockwise to firm up the ride or counterclockwise to give it more slack — allows you to tune the ride, within a degree, to your liking. But the fact remains that there's only a claimed 2.15" of travel available, and when you play that out, the result is a big "thud" as the shocks hit their bump stops. At that point most of the road's bumps and dips are soaked up through the massive 49mm-diameter fork legs only.

That low center of gravity, coupled with the standard ABS, makes slowing and whoa-ing the Street Glide Special easy and predictable. There's not much hand pressure



required to activate the twin front brakes, and should you feel especially lazy, you can rely solely on the Reflex Linked feature, using only the foot brake pedal to prompt the rear brake and left-side front brake to bring you to a stop. Under extreme braking conditions (yikes, a panic stop!), the ABS keeps the bike upright and safe while you clamor to a complete stop from 30 mph in 30' (applying both brake controls for this). Riding through back roads that require up- and down-shifting coupled with methodical braking is easy, and mix in the Special's responsive handling and you're rewarded with one fun day in the saddle.

NGINE PERFORMANCE IS WHAT YOU EXPECT FROM any of the current RUSHMORE-generation Big Twins. Fuel metering is smooth and linear from the electronic sequential-port fuel injection, with instant acceleration in practically any gear when engine speed is above 2000 rpm. Use the Cruise Drive six-speed transmission to keep the engine in its torque band, and you're rewarded with snappy acceleration under most conditions. Pack the lockable saddlebags with gear, put a passenger on the back seat, and the Special still chugs willingly up to speed, and the whole time you'll enjoy the pleasing exhaust note from its 2-into-1-into-2 tapered mufflers. Or tap into any of the quality aftermarket mufflers available on the market to boost performance and acquire an all-new exhaust tone.

Much has been written about the RUSHMORE infotainment systems found on all of Harley's current baggers, but it's worth pointing out that the four-speaker system on the Special gives adequate surround sound for a standard-issue unit. Fingertip controls allow you to change stations on the fly, and if you must stay connected to the rest of the world while you ride, the Bluetooth comes in handy. I prefer to ride untethered to any base camp, so I seldom call on the infotainment center to reach out to faraway places. But it's always nice to know that I can keep in touch, should the need arise during an all-day foray in the saddle.

As with any current Harley, the fit and finish on the Special is top-shelf. Harley's paint jobs are always first-class, and if you're not a fan of green (our bike's lime green pinstripes accent its Deep Jade Pearl color), Harley painters offer a variety of other colors for the Special. This year the FLHXS comes in Vivid Black (standard color), Brilliant Silver Pearl, Amber Whiskey, Charcoal Pearl, Morocco Gold Pearl, Black Denim, and the Jade. The nonstandard colors bump the bike's MSRP from \$22,899 to \$23,399, not a bad price to pay for a custom-quality color.

No doubt the bagger market tops the leaderboard in terms of sales and popularity of models. And with such a complete and custom-like package, it's easy to understand why the Street Glide dominates the sales chart. The FLHXS, packed with even more add-ons, makes the Street Glide line even more special. **AIM**



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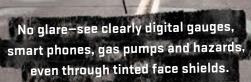
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Poole's drop-seat bobber

text by eric ellis

photos by nate ullrich



ELIEVE IT OR NOT, THERE ARE PEOPLE IN the custom motorcycle world who are in it simply for the love of creating something that they can admire and ride. These people cut, weld, craft parts, and build bikes to fulfill their passion for working with their

home-based shop. Sure, he has a business name, Poole's Custom Cycles (PCC), but that's about as business-oriented as he gets. He doesn't have a business address or a web site and doesn't spend much time promoting PCC other than just riding and enjoying his bikes. Sometimes he'll build a bike and ride it around for several months before someone will

hobby, building around one to three bikes a year out of his

hands and expressing their creativity. They may sell their builds when complete, but money isn't the sole objective. Fame, notoriety, or bad mouthing fellow builders doesn't appeal to these guys.



cycles as a hobby many years



make him an offer, and sometimes it's only a couple of weeks.

For Jim, it's more about the process of the build than it is about the money. Over the years, he's built 33 Harley-based

customs, with more still in the works. He's followed some of the trends, building choppers, bobbers, and baggers, but his guiding principle is that he always tries to keep his builds different from one another. And while he's covered the gamut of styles, Jim says his favorite is more along the lines of the stripped-down bobber. As you can

see by the Softail displayed on these pages, his style is quite unusual compared to most of the bobbers you see today.

Fond of drop-seat bikes, Jim says he likes the feeling of being "in" the bike rather than on top of it. He started this build by setting an Ultima stock softail-style frame up in his frame jig. He then began cutting up the frame to drop the neck a little bit and then reworked the backbone and midsection to create the drop-seat look. These heavy frame modifications resulted in a 3" stretch in the seat

pocket area, thus providing plenty of room to comfortably place the rider between the rear fender and backbone.

DNA SPRINGER FRONT END WAS USED TO GIVE A MORE traditional bobber look. However, to help the bike sit more evenly with the lowered neck, Jim cut about 6^{\shortparallel} out of the legs. One of the key elements when build-

ing a bobber is to keep the overall weight of the bike down. To that end, Jim drilled speed holes in the rear legs of the springer, which he also added to the other elements of the bike like the swingarm side plates and fender struts that he welded and blended into the rear of the frame. Rather than using risers to mount the handlebars, Jim cut a set of Sporty handlebars in half and welded them to the sides of the top plate of the springer. This not only kept the bars low but

also gave a nod to the old springers. Underneath the swingarm, a pair of stock H-D shocks were bolted in

place to handle bumps out back. Jim used pair of DNA spoked wheels wrapped in Shinko whitewalls for aesthetics and to save weight.

Opting to go with an exposed front tire, Jim cut the front section off a Drag Specialties softail-style rear fender and then rolled the fender forward over the 130mm rear Shinko for more of a hot rod look. His

next order of business consumed most of the build process. With the drop seat taking up the

space where the oil tank
would normally go on a
Softail, Jim created a gas
tank with an oil tank incorporated into the front left side. He
sectioned off the front third of the

tank, welded up the insides, and

installed bungs for the oil lines to run along the outside. He used a creative mounting system for the oil tank, welding pieces of chain to the tank and then used the eyelets of the chain links to slip bolts through and secure the oil tank to the gas tank. While working on the left side of the gas tank, Jim also added a sight glass to gauge his fuel

With the majority of the chassis and sheet metal fabrication complete, Jim turned his attention to the powertrain. He mounted an 80" Harley motor between the frame rails, backed it up with an Ultima six-speed transmission, and then tied the two together with a 3" open belt drive. Just under the seat area, Jim welded a simple tray to hold

the battery securely in place.

Jim found an oval Briggs & Stratton air

level.

AlMag.com

filter element and used it as a template to cut out a top and bottom plate. He then used some leftover exhaust tubing to form a rounded W-shaped intake. Below the one-off intake, Jim salvaged a slip-on megaphone muffler off a smashed BUB bagger exhaust system to create a slick

2-into-1 pipe for the Evo motor to expel spent fumes.

Once the drivetrain was taken care of, Jim hand-formed all the oil lines out of copper. A tedious process, it took him

a couple attempts to get the first line running from the front of the oil tank, down along the left side of the motor, and around to the black paint. Holmes also covered the frame,

right side of the engine case. However, after he had one line formed, it was much easier to use it as a guide for the other lines. Next, a few pieces of 3/16" flat stock steel were cut, shaped, drilled with speed holes, and then mounted down the center of the gas tank, rear fender, and over the megaphone muffler to work as accent pieces.

Jim finished the mock-up of the bobber with the addition of a few essentials such as V-Twin Manufactoring forward

> controls, an internal throttle, and a solo seat from Low Brow Customs. The bike was the then torn down and sent out to Holmes Collision where the sheet metal was doused in a sea of deep

> > swingarm, and springer in a nice silver luster. Once the basecoat on the sheet metal had cured, some traditional red and

white pinstriping was laid down over the top of the tank and fender.

While it only took Jim two months to build his drop-seat bobber, this is a style of bike he's been wanting to build for quite some time. I'm sure glad he finally did because this is one sweet machine! Maybe he'll keep this one around for awhile, but I suspect he's already moved on to the next. I hope so, because I can't wait to see what he churns out next! AIM

TECH SHEET

Owner: Poole's Custom Cycles

Builder: Jim Poole Year/model: 2010 custom **Time to build:** Two months Powdercoater: Reflex, Milan, IL **Painter:** Holmes Collision

Color: Black

POWERPLANT

Engine: 1996 Harley-Davidson Evolution

Builder: Harley-Davidson

Displacement: 80"

Cases: Harley-Davidson

Flywheels: Harley-Davidson

Cylinders: Harley-Davidson

Pistons: Harley-Davidson

Heads: Harley-Davidson

Cam: Harley-Davidson

Valves: Harley-Davidson

Rockers: Harley-Davidson

Lifters: Harley-Davidson

Pushrods: Harley-Davidson

Carb: Harley-Davidson

Air cleaner: Poole's Custom Cycles

Exhaust: Poole's Custom Cycles

Ignition: Ultima

Charging system: Harley-Davidson

Transmission: 2010 Ultima six-speed

Gears: Ultima

Clutch: Ultima Primary drive: 3" belt Final drive: Chain

CHASSIS

Frame: 2010 Ultima softail-style

Rake: 38 degrees

Stretch: 3" in tail section

Front forks: DNA springer

Mods: 6" under

Swingarm: Harley-Davidson

Shocks: Harley-Davidson

Front wheel: DNA 16"

Rear wheel: DNA 16"

Rear brake: Harley-Davidson Front tire: Shinko 130-16"

Rear tire: Shinko 130-16"

Rear fender: Drag Specialties

Fender struts: Poole's Custom Cycles

ACCESSORIES

Headlight: V-Twin Manufacturing

Taillight: Harley-Davidson

Fuel tank: Poole's Custom Cycles

Oil tank: Poole's Custom Cycles

Handlebars: Harley-Davidson Sportster

Seat: Low Brow

Speedo: Poole's Custom Cycles

Dash: Poole's Custom Cycles

License bracket: Poole's Custom Cycles

Mirrors: Drag Specialties

Hand controls: V-Twin Manufacturing

Foot controls: V-Twin Manufacturing

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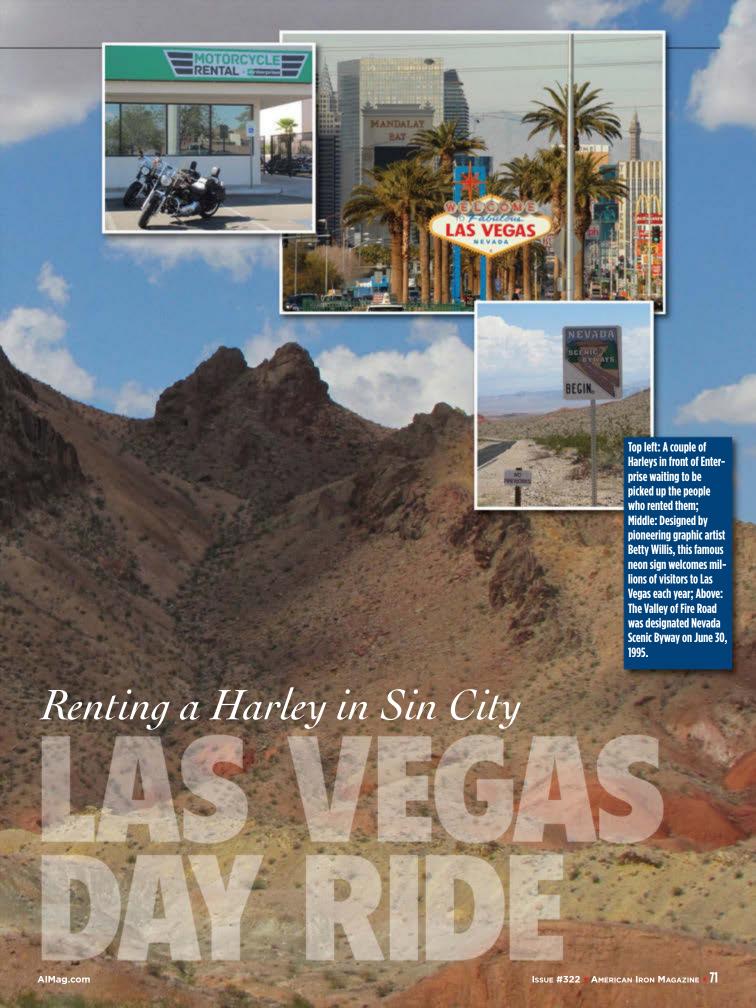


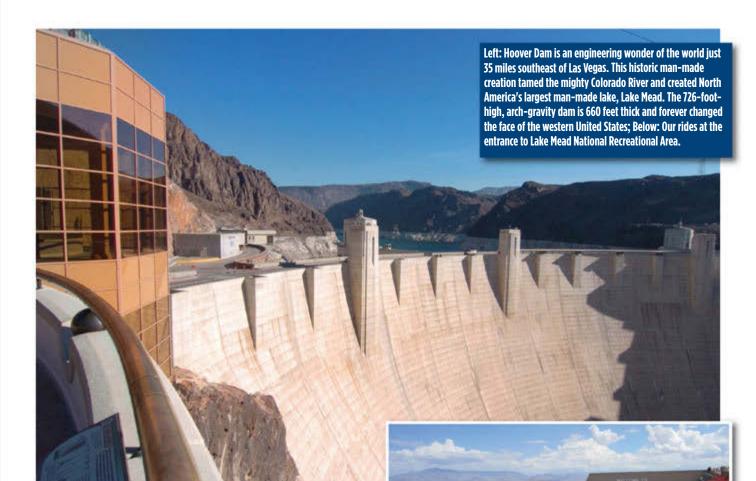
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YOU'VE PROBABLY heard the famous World War II idiom "Loose lips sink ships." Well, I'm proud to say for the record that I can keep a secret

and, not to toot my own horn, I'm pretty good at it! But for the sake of this story, I'm going to buck conventional wisdom to let you in on what I did the last time I visited Las Vegas. I know, I know! By doing this, I'm breaking that golden rule and famous copyrighted tourist slogan "What happens in Vegas, stays in Vegas." But it's worth letting *American Iron Magazine* readers in on this new opportunity available to them.

Now that I have your attention, the story begins when I visited Sin City last autumn for business unrelated to the magazine. Just before that visit, it came to my attention that the world's largest car rental agency, Enterprise, had chosen Las Vegas as the location for launching its new Harley-Davidson rental business (see sidebar). Armed with that knowledge, my buddy and business partner decided to include a day of riding in our already-packed schedule. So we reserved a couple of Enterprise bikes, a 2014 Road King for me and a 2014 Ultra Limited for him.

There's always so much going on in Vegas that whenever I'm there for an extended amount of time, soon enough, I feel a need to escape the craziness to recharge my batteries. On this trip, I easily accomplished this by setting up a bike rental and doing a day ride out of town. There are plenty of short rides in the Vegas vicinity that will take you away



from the hustle and bustle of The Strip. For example, just minutes away is Red Rock Canyon National Conservation Area and Mt. Charleston, both of which offer some great roads to ride and sights to see.

For our day ride, we opted to check out the Valley of Fire State Park (VOF) near Lake Mead Recreational Area and iconic Hoover Dam. To do this loop, we entered the VOF at the West Entrance Station. So once we got our bikes on West Flamingo Road we simply hopped onto Interstate-15 heading north of The Strip for about 50 miles until we reached Exit 75 where we

got off for a pit stop at the Moapa Paiutes Travel Plaza. This place is truly an oasis in the desert! It includes a cafe, casino, convenience store, gas station, and a cool separate "fireworks only" store. Being situated on the Moapa River Reservation, the rules are different, meaning the selection of fireworks is extensive, and, more importantly, the price of booze is the best you'll find anywhere in the area. After grabbing some breakfast at the café, we topped off our tanks before heading east on the Glendale-Moapa Road (Nevada State Route 168). The twisty road leading to the Valley of Fire's entrance was entertaining, but soon enough, we reached the gate. Note: the park never closes but there's always a fee for entry, which, in my opinion, is certainly worth the cost.

Crossing into the park, it's hard not to be taken aback by the landscape's natural beauty. The park's name is derived from the vibrant, 150-million-year-old red sandstone that dominates the landscape. When the sun's rays hit the sandstone rocks just right, they seem to be on fire! Dedicated in





MOTORCYCLE RENTAL BY ENTERPRISE

BACK IN LATE 2013, ENTERPRISE BECAME THE first of all the major car rental companies to offer motorcycle rentals in the US. Enterprise chose Las Vegas for its first foray into the Harley rental business. Having this new option is great news for any Harley rider looking to rent a bike while visiting Sin City.

I was told that the company decided to enter the Harley rental business after demographics showed that motorcycle owners and Enterprise automobile renters matched up nicely. So much, in fact, that when surveyed over recent years, existing Enterprise customers began specifically asking for motorcycle rental options. Those factors, combined with the company's extensive experience in four-wheeled rentals, allowed Enterprise to realize that offering motorcycle rentals was a natural evolution of its business.

If you're wondering and consistent with the Enterprise promise, the company will actually pick motorcycle renters up (in a four-wheeled vehicle) to deliver them to the branch office for their motorcycle rental. Heck, Enterprise even gave us a ride back to the hotel after we returned our rides. As an added bonus, the rental company provides all motorcycle renters and their riders with helmets free of charge. As always, all motorcycle renters are required to carry a valid motorcycle license and liability insurance.

The Enterprise branch offering Harley rentals is located just minutes away from the famed Las Vegas Strip on Flamingo Road. At the time we rented our rides, the company had nearly 100 late-model Harley-Davidson motorcycles to choose from, which came in 12 different models within the Dyna, Softail, Sportster, and Touring families.

If you're planning on visiting Las Vegas and you're interested in renting a motorcycle, visit Enterprise.com/Motorcycles to view rates and to book a rental. And making good to its motto, Enterprise even picks you up ... and brings you back!

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1935, the Valley of Fire is Nevada's oldest and largest state park, covering nearly 42,000 acres. It became a National Natural Landmark in 1968 and abuts Lake Mead National Recreation Area. Besides the stunning Jurassic-aged geology, the park offers visitors wonderful examples of prettified wood and 3,000-year-old Native American petroglyphs. Mouse's Tank and Atlatl Rock are two relatively easily accessible areas to see many of the glyphs. About halfway into the park, it's worth checking out the full-scale visitor's center and its many informative exhibits.

As you can imagine, the park is a popular getaway for locals and visitors alike. Over the years, the VOF has been a popular location for shooting films and television shows. For example, the outside Mars scenes from Total Recall (1990), starring Arnold Schwarzenegger, were almost totally shot in the Valley of Fire. In addition, all the Veridian III scenes in Star Trek: Generations (1994) were filmed here, which means it was in this valley where Captain Kirk fell to his death! Yet another example comes from the Michael Bay-directed film Transformers (2007), which includes a scene of the Autobots driving through the valley with other military vehicles at sunset. A final example, and the one that got me excited most, was that the 1984-87 CBS TV show Airwolf (one of my favorites ever!) used the Valley of Fire (named the Valley of the Gods in the show) as the secret hiding place for the stolen supersonic helicopter Airwolf.

SOURCES

MOTORCYCLE RENTAL BY ENTERPRISE

702/257-0304 Enterprise.com/Motorcycles

LAKE MEAD NATIONAL RECREATION AREA

702/293-8990 NPS.gov/Lake/index.htm

LAS VEGAS CONVENTION AND VISITORS AUTHORITY

877/847-4858 LasVegas.com

LAS VEGAS TOURISM BUREAU

702/577-3564 LasVegasTourism.com

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702/864-2600 MoapaPaiutes.com

VALLEY OF FIRE STATE PARK

702/397-2088 Valley-Of-Fire.com Riding through the park doesn't take long, but I encourage anyone visiting to take his time. Stop and check out some of the rock formations up close because there are some amazing outcrops, and it's hard to believe they are all naturally created. Keep in mind, too, that the Valley of Fire gets blazingly hot during summer months, so plan your trip accordingly.

Once we reached the park's eastern edge, we decided to head south to Lake Mead Recreational Area (LMRA). The LMRA falls under the US National Park Service domain, so there's a separate fee to enter this area; the VOF is state-run. Once we were paid up, we rode Northshore Road (Nevada State Route 167) southward along Lake Mead's western shores. We were again treated to sweet twisty roads that wind their way through beautiful

naturally occurring landscape. Our intent was to take this road around Las Vegas Bay and onto South Lakeshore Road before heading onto Hoover Dam. But as fate would have it, as we rounded the bay, we noticed dark, ominous thunder-clouds building just west of us. Having been caught in heavy, desert rains during past trips, we decided to cut our ride short to Hoover Dam to head back to Vegas. To do this, we turned onto Lake Mead Boulevard (State Route 147), which took us into North Vegas where we scooted south on Inter-

state-75 towards the rental facility. As it turned out, the thunderstorms caught us before we could return the bikes, so our remaining few miles were ridden in a heavy downpour with flash floods occurring all around us. As we pulled into the rental lot, we realized that even though we were initially disappointed for cutting our ride short, we made the right call by heading back and not getting caught at Hoover Dam in severe thunderstorms.

If you're planning on being one of the 40 million people to visit Las Vegas annually and you love riding Harleys, I strongly suggest you rent a bike while in town. No matter if you're in town for business or pleasure, there's no better way to experience The Strip than cruising it on a Harley. I also urge you to leave the city limits in your mirrors for a day cruise of the area surrounding Sin City. Think of it as a story that you can tell people about your visit when you get back home, but without worrying that your loose lips might sink ships! **AIM**



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Finland's Jussi Lindgren hammers out a sweet, street-ready Shovel

text by charles

photos by siwer ohlsson







OPE. IT AIN'T THE OLD B movie CC Rider that inspired the name of Jussi Lindgren's retro Shovel. It's simply the English translation of Jussi's place of birth: Kokemäki in the Kupparikallio district of Finland.

CCC simply means Cupper Cliff Custom. "I thought of using the Finnish name, but that would have turned into KKK, which wouldn't have a very nice sound to it ..."

We usually meet Jussi at work where he's the chief mechanic at Harley-Davidson Tampere. But not today. Jussi has a screwed-up back and is off work for several weeks waiting for a hospital appointment.

"My problem is actually bikerelated. I have been wearing the wrong clothing, so the muscles have been exposed to cold drafts and cramped up somehow," Jussi says with a grimace. And we guess when a guy is 190cm tall (6'2") and builds a compact bike in a crouched-up riding position, there could easily become an unhealthy opening between jacket and pants.

Working on Harleys all day long: doesn't that mean you've had enough of bike work by the time you go home in the evening? Not Jussi.

"Once I have gotten home, eaten dinner, and taken a shower, then I feel like going back to the bike shop!" Jussi says. "My girlfriend, Saara, says it feels unusual and strange when I'm

finally home for awhile. But she understands my passion and has been okay with it for the last 10 years."

There's also a bit of a difference between the kind of wrenching Jussi does 9 to 5 and in his free time. "Since we became an official Harley dealership, most of my work is the service and repair of stock hogs, especially in summer," he says. "Sometimes in wintertime, we still get to do a little customizing work, but nothing like back in the old days."

ESIGN WISE, JUSSI ADMITS THERE ARE SOME folks in the building scene that he really admires. Two of the top names on his radar are Max Schaaf at 4Q Conditioning in Oakland, California, and Caleb Owens at Cro Customs

in Los Angeles. "I don't really follow any trends," Jussi says. "But on the other hand, if you see something you like, you like it. You know what I'm sayin'?"

Jussi started this Shovel-based build by putting a frame together with seamless hydraulic tubing and some cast parts from stock Harley frames. So why not make it

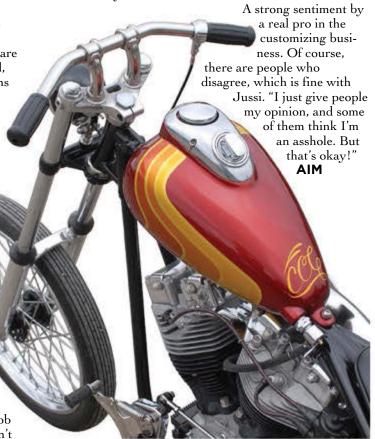
easier by using a H-D frame to begin with? "Hmmm, good question!" Jussi says. "I guess I just think building frames is an exciting challenge. They are the skeleton of the bike, so to speak."

Jussi's dad, Heikki, seems to be a petrolhead as well. One day he gave his son an old aluminum engine cover from a CZ motorcycle and presented him with a challenge. "Let's see what you can do with this thing!" Heikki said. No problem for Jussi. He simply turned it into a dashboard! The oddball details make this bike interesting, like the old boat lantern turned into a taillight and a permanent anti-wobble bridge welded between the lower legs. Thinking outside the box, oh, yeah!

The painters, two brothers named Heinimaa along with Jussi, came up with a 1970s-style metalflake paint job that would match the tall, early chopper look. Jussi doesn't

care about entering his bike in any shows, and he already has his next project underway: an Evo that will become "as slim and narrow as possible."

Before we went our separate ways, Jussi shared his views about a thing or two. "I love the biking scene but have avoided shows lately," he says. "There are too many posers who just want to win prizes. That's not what motorcycles are about. Motorcycles should be built to ride and handle well."



TECH SHEET .

Owner: Jussi Lindgren, Tampere, Finland

Builder: Jussi Lindgren **Model:** 1970/2014 custom

Painters: Heinimaa Brothers, Kauvatsa, Finland

Paint: Candy miniflake
Logo: Nestori Creations

POWERPLANT

Engine: 1970 Harley-Davidson FLH

Displacement: 74" (1200cc)

Cam: Stock

Carb: S&S Cycle Super E

Air cleaner: Boyle Custom Moto

Exhaust: Stainless steel, modified by Jussi Lindgren

Ignition: Stock

Transmission: Harley-Davidson four-speed

Clutch: Harley-Davidson
Primary drive: BDL belt

CHASSIS

Frame: Harley-Davidson parts, Jussi Lindgren

Rake: 30 degrees Stretch: 1" up, 1" forward

Front forks: Harley-Davidson 35mm Narrow Glide

Mods: 6" stretch

Triple trees: Harley-Davidson Ironhead Sportster

Front wheel: Harley-Davidson 21"
Rear wheel: Harley-Davidson 19"

Rear brake: Harley-Davidson hydraulic drum

Front tire: Avon Speedmaster 3.00-21"

Rear tire: Avon 4.00-19"

Rear fender: Harley-Davidson, narrowed

ACCESSORIES

Headlight: Fog light
Taillight: Boat lantern
Fuel tank: Mustang
Dash: CZ engine cover

Oil tank: Harley-Davidson, modified

Handlebars: Jussi Lindgren Seat: Satula-Ilkka

Foot controls: Stainless, modified by Jussi Lindgren

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ASKET CASE PROJECTS CAN BE CHALLENGING. Missing pieces, wrong parts, and years of neglect often add up to frustration for the

But there was no question that Carl Booth Jr. of Eden, North Carolina, would finish the 1965 Harley-Davidson Sportster gracing

these pages. That's because the machine once belonged to

his late brother, Kenny. "He bought it as a project from our local bike shop, Draper Cycle, in 2006," Carl says. "Parts were definitely missing, and there were parts in the boxes that didn't belong to a Sportster."

According to Carl, Kenny didn't like to spend time on the computer and was tracking down missing components the old-school way — by telephone. But Kenny wasn't in a rush. He was slowly picking away at the project, taking his time and enjoying the process. "Although Kenny's first bike was a 1979 Sportster, I don't think there was any real connection between him and a '65 model," Carl explains. "I think he just wanted to show me that he could build a bike himself, because I've been build-

ing them since 1980. When he was working on the Sportster, he'd never call me for advice, but I knew what his vision was for the finished bike, and I didn't change

anything that he'd started."

HEN KENNY WAS KILLED IN MID-2010, HE HAD already acquired the large Sportster tank and had just picked up the frame and swingarm after having them powdercoated black. Kenny had worked with his friend Ben Lipford to resurrect the 900cc engine. Ben also happens

to be Carl's next door neighbor and is a talented machinist. Ben and Kenny replaced all the bearings, installed standard-bore cylinders and pistons, and put stock Harley-Davidson parts, including valves and rockers, in the cylinder heads and rocker boxes.

Carl bought the Sportster project from the estate and brought it home with him to continue piecing the machine back together. Items such as the wheels and tires, including a stock Harley 19" front complete with drum brake and a 16" rear from V-Twin Mfg. were included in the parts already in hand. Missing, however, was a good lower triple tree. "I was at an antique motorcycle event in Denton [North Carolina], and I was in the last row at just about the last vendor when I looked into the bottom of a 5-gallon pail," Carl says. "He had the lower tree in there, and when he told me he wanted \$35 for it, I couldn't get my wallet out fast enough!"

Carl was having some trouble finding parts, although he wasn't averse to using the computer. It got easier for him after he located a parts catalog and began searching eBay and other sites by simply typing in the required part numbers.

The front and rear fenders, rear fender struts, handlebars, risers, and controls all came from J&P Cycles. Carl assembled the complete Sportster with all of the tins to ensure they fit correctly before sending anything out for paint. Sure

enough, he had to tweak the front fender brackets to ensure it would sit nicely in the fork and follow the lines of the Dunlop tire. He kept adding to the project, installing a large 7" headlight that was supplied by V-Twin.

On his metal lathe, machinist/neighbor Ben turned up alloy plugs to conceal holes on either side of the Auto Meter speedometer in the chrome headlight nacelle. One of those



holes is where the keyed ignition switch would originally have been located, but Carl moved the switch to between the engine cylinders near the top engine mount.

Carl also relocated the coil, which should be up front near the bottom of the gas tank. Carl built a bracket and mounted the coil under the nose of the seat. A stainless steel battery box was custom-made by local fabricator Timmy Shields, with some help from metal workers at A/C Corporation in Greensboro, North Carolina. All of those bits, including several others such as the seat brackets, were powdercoated by Luke Long of Long's Kustoms in Eden.

There's a story behind the seat. Carl found it on eBay in Canada, and it included the backrest. As purchased, it was all white. While mocking up the



Sportster, the color didn't bother Carl, but he had trouble finding the correct brackets to mount it. He tried several times from numerous sources to get the right bracket, but Clete Borchert of Old Dude Vintage Parts & Service in Lilburn, Georgia, ultimately supplied the correct item. Clete provided other small pieces of hardware, such as the metal tube that guides the front brake cable on the right side of the fork.

C

ARL SAYS EVEN MORE ODDBALL BITS WERE supplied by Andy Lund at eHarleyParts.com in Eleva, Wisconsin, and Robert Luland of

The Good Old Motorcycle Parts Company in

Hoboken, New Jersey. "The bike wouldn't have been finished without their help," Carl says of these dedicated folks.

There was never any question that the Sportster would be painted metalflake red and black, with the two colors separated by a white pinstripe. Kenny had kept a picture on his refrigerator of a red and black Sportster, and Carl sent the photo and tins to Justin Barnes of JB Grafix in

Marlboro, New York. While the fenders and gas tank were being painted, Carl sent the white seat to Sargent in Jacksonville, Florida. He wanted the sides done white and the top finished black. He says the saddle looked great, until it went on the bike. "It just didn't look right, and I had to send it back," Carl chuckles. "It was completely my fault, and [Sargent was] very good to me about redoing the cover."

For reliability, Carl says he installed a Mallory electronic distributor, Pingel petcock, S&S Super E carb, and a stock-style exhaust system. When he went to fire it up, though, he kicked and kicked and kicked without success. Second-guessing him-

self after trying several different fixes, Carl took the Sportster to Jesse Derrenbacher at Busted Knuckle Inc. in Walnut Cove, North Carolina. It took Jesse just a few days to dial everything in, and now the Sportster runs like a champ.

Carl will never sell it.
Every time he looks at it, he's reminded of the trials and tribulations of building a basket case machine. But then, Carl says, he thinks of his younger brother, and the memories make all of the effort worthwhile. **AIM**



TECH SHEET

Owner: Carl Booth Jr.

Builder: Carl Booth Jr., Ben Lipford, Kenny Booth **Year/model:** 1965 Harley-Davidson Sportster

Cost to build: \$11,000
Time to build: Eight years

Chromer: Kevin Parks, The Chrome Man, Midland, NC

Polisher: Carl Booth Jr., Ben Lipford

Powdercoater: Luke Long, Long's Kustoms, Eden, NC

Painter: Justin Barnes, JB Grafix Custom Painting Inc., Marlboro, NY

Colors: Red and black metalflake with white pinstripe

POWERPLANT

Engine: 1965 Harley-Davidson Sportster

Builder: Ben Lipford, Kenny Booth

Oisplacement: 900cc Cylinders: Stock

Pistons: Wiseco 9.0:1

Heads: Stock
Cams: Stock

Carb: S&S Cycle Super E

Air cleaner: Paughco

Exhaust: Stock
Ignition: Mallory Ignition

Coils: Andrews Products

Wires: Blue Streak Performance Wires
Charging system: Cycle Electric Inc., 12 volts

Primary cover: Early Harley-Davidson Sportster **Transmission:** 1965 Harley-Davidson Sportster

Gears: Stock
Clutch: Stock
Primary drive: Chain

Final drive: V-Twin Manufacturing

CHASSIS Frame: 1965 Harley-Davidson Sportster

Front forks: Stock
Swingarm: Stock
Front wheel: Stock 19"

Rear wheel: V-Twin Manufacturing 16"

Front brake: Stock drum
Rear brake: Stock drum

Front tire: Dunlop D404F 100/90-19"
Rear tire: Dunlop D404 130/90-16"

Front fender: J&P Cycles
Rear fender: J&P Cycles
Fender struts: J&P Cycles

ACCESSORIES

Headlight: V-Twin Manufacturing 7"

Taillight: Stock

Fuel tank: Large Harley-Davidson Sportster

Oil tank: Stock
Handlebars: J&P Cycles
Risers: J&P Cycles

Seat: Stock, covered by Sargent, Jacksonville, FL
Seat brackets: Old Dude Vintage Parts & Service, Lilburn, GA

Pegs: Stock
Speedo: Auto Meter
Mirrors: J&P Cycles
Hand controls: J&P Cycles
Foot controls: eHarleyParts.com

Levers: J&P Cycles



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ITH ALL THE NOISE THAT CAME FROM Polaris Industries' Indian camp this past year or so, it was only a matter of time before the other motorcycle company from Minnesota broke its silence. And when Victory Motor-

cycles decided it was time to be heard, the ruckus came in a big way: a new Magnum-based bagger that pipes 200 watts of audio amped into 10 speakers. Let's hear it for the Magnum X-1!

"This bike is built to shatter the sound barrier," says Brandon Kraemer, Victory's product manager, during the X-1's special sneak preview at an audio-video studio in Simi Valley, California, last January. Kramer was speaking in figurative terms, of course. His words were aimed at those 10 speakers — six of which reside in the fairing dash, the remainder in the bag lids — that are poised and ready to



broadcast whatever tunes you deem worthy of playing through the onboard audio system. For the most part, the sound system's controls are the same as those on the standard Magnum because the X-1 is essentially a reissue of that model, but with bolder acoustics and a wilder display of paint graphics (Victory describes the red pinstripes as Electric Red), and contrast-machined components that include an all-new 21" black billet front wheel design. There's also a sun-bright, smoke-tinted LED headlight that can practically melt your retinas to light the way.

Kraemer's reference to the sound barrier explains the Magnum's X-1 moniker, too. The first man to break the sound barrier was US Air Force test pilot Chuck Yeager, and he did so back in 1947 piloting the experimental rocket-powered aircraft Bell X-1. Victory's new Magnum X-1 won't necessarily take you near Mach 1, but people at Victory are hedging their bets that the 200-watt audio

system is loud enough to break another sound barrier, of sorts. You want loud tunes while you ride? The X-1 will deliver, claimed by Victory to be four times louder than a standard Cross Country. And, to drive home that fact, the folks from Victory parked one of the new bikes in the acoustically rich sound studio where they cranked up the volume. Simon and Garfunkel's classic "Sounds of Silence" most certainly was not on the play list.

Indeed, the Magnum X-1 might be the vanguard of future models from the Minnesota-based motorcycle company because Polaris is poised to ramp up Victory's role in how it markets motorcycles. Victory Brand General Manager Rod Krois explained that the motorcycle community should expect even more diversity between Indian and Victory models in the future, with America's oldest brand (Indian)

continued on page 143

THE BEAST'S **DUALITY**

Ron converts his 1975 Shovel into a trike

OPEN UP AN OLD BOOK WITH BLACK AND WHITE PHOTOS like Chilton's Repair and Tune-Up Guide, Harley-Davidson *V-twins* (1975) and locate a photograph of a Shovelhead. Now cut and paste the iconic Big Twin over a trike in American Iron Magazine. I betcha it's gonna look awkward. Now this sloppiness isn't manifest in the running, excess glue, or clash in colors. Nor is it evident in the myriad of dog ears refusing to cooperate. Analogous to an actual build, trying to fuse parts on a bike from different time periods is difficult, especially when a particular era in motorcycle history is defined by one or more of the installed components. And seeing

that timelines are already mercurial, the more years you throw into the time gap between two elements on a bike, the harder it becomes to combine them successfully. And yet, Ron Bruce did just that when he constructed a trike body around his 1975 Shovelhead engine.

Those who incorporate or restore engines like a Shovelhead see they are continuing or reinstating The Motor Company's past. Like these nostalgic



riders, Ron prefers the older ways; he loves the rumble of Shovels and the shake of the solid mounts. As we talked, I realized how imperative it is to him that Harley safeguards the past, so, naturally, I brought up Project RUSH-MORE. His response is a melancholy outlook at best, culminating in an overall sense of loss. "No, no, no, no," he says. "It's all about the nostalgia factor of the whole, which Harley-Davidson seems to have forgotten. It seems like it's past tense. There's not many of us left who even know what an old bike sounds like or what it's like being numb after a ride."

With this, I knew exactly what this story would be about. I'd illustrate a tale of a torn man with a traditionalist mentality struggling desperately to preserve the past while incorporating modernity. His Shovel's duality between old-school aesthetics and modern comfort. See, Ron still realizes the shortcomings of vesteryear and the advances of tomorrow (he has a hydraulic shifter from AB Hydraulics), so rather than going the whole nine yards, Ron compromised by running halfway by keeping the Shovel and encasing it in a modified frame that includes the hot rod rear end kit from Frankenstein Trikes.

The irony is that what made Ron want to go the trike route initially (the futuristic part) was inspired "a wee bit" by the past, not a Tri Glide. Ron paints the scene: a small Canadian town in the late 1970s. A younger Ron is hanging out with his friend and a group of bikers when he sees an old, fenderless 45 Servi-Car. It has N50 series tires with rims sitting out the back. "I never forgot how that thing looked," Ron recalls.

While Ron never owned a Servi-Car, he would later transfer some of that particular vehicle's qualities to his 1975 Shovel. Many years later (15 years ago), Ron bought that Shovelhead and rode the heck out of it for five years. But thanks to the Medical Public Insurance (MPI) of Canada, the Shovel soon became a permanent member of his garage. But let's keep politics out of this.

Got a bike you think belongs here? Well, send it to Readers Ride@AmericanIronMag.com or Reader's Ride, c/o American Iron Magazine, 1010 Summer St., Stamford, CT 06905. Be sure to send a few digital images showing both sides of the bike shot the same way we do a bike feature, as well as some shots of you with the bike. We'll also need full contact info for you, including a daytime phone number. Sorry, photos will not be returned.



"There's not many of us left who even know what an old bike sounds like or what it's like being numb after a ride."

Let's just say his bike gathered dust for a decade before Ron finally took it out in 2012 and began working on the engine. And when a new variable, the extra wheel, entered the equation, Ron had to compensate. Now 6" bigger in displacement, Ron's engine has an Andrews AB grind cam, S&S Super E carb, JIMS roller rockers, and bronze valve guides, among other modern parts.

It was only when Ron found himself knee-deep in parts that he realized tinkering on a Shovelhead wasn't going to be easy. "I wish I went with a Fat Boy just because the parts are more available. It would've been a lot easier to do a 5-degree triple tree rake," he says. Ron accomplished the rake by installing a universal V-twin triple tree for 41mm forks, which then required him to do some cutting on the stem. And the mods just continued to pile up. He even had to rewire the whole bike to the rear junction box.

Yes, this isn't just your average case of trike fever. Like the Servi-Car, the rear end kit Ron chose came with some b-i-g-g tires. To fill the void, Ron went

to Sportsman Pro and installed monstrous 29"-tall tires on 5.00-18" wheels. The rims, also a highlight on Ron's trike, are total custom one-offs fabbed from Centerline Wheels. Embellishing all that are some fenders from Oldy's Custom Composites, 19"-wide fenders that he fiberglassed together. While Ron had some guidance from an auto body guy to make up a template, everything was his idea, especially the point at the end.

Besides the large rear wheels and the Shovel itself, what caught my attention was that the trike resonates aggression (in fact, it's known as The Beast on the internet, due to its size and, most likely, its Shovel growl). Part of the trike's dynamics comes from the new seat/handlebar/floorboards setup, which was just Ron's way of trying to pull the sci-fi-ness back into the past. "I was kind of formatting it back to the way the bike was."

As you've realized, Ron doesn't want to create something derivative. At the end of the air breather, there's a skull that's not from Screamin' Eagle as I originally thought. Ron actually carved it out of a chunk of soapstone. Ron then installed a nut so he could mount it. As for the stub of the frame, it originally stuck out from the back of the bike, so Ron added yet another personal touch by finishing it with pikes. And while we're on the topic of



originality, let's talk about the sinister skull headlight from Chris Sixkiller, owner of 6killer Custom M-cycle Lighting. "I had a rough time casting it," says Ron. And by rough, he means painstakingly agonizing. In short, it was only set up for show online. Ron had to get three 35-watt halogen lights, which he wired through the nose and eyes (the low beams are in the nose and the high beams shoot out from the eyes). "It took me 15 hours to do that

stupid headlight," says Ron. But I guess that's what you get when you buy the \$400 option instead of the \$1,000 three-month-waiting-period skulls.

While Ron seems pretty adamant about keeping control over the build, there were some aspects Ron was pretty indifferent about, which I realized after asking him about the solo seat:

"Uhhh, I think... jeez, it could be a V-Twin."

"Corbin?" I suggested.

"You know what? I think it is a Corbin seat."

Surprisingly, Ron's nonchalant attitude also encompasses the paint job. Ron didn't even know much about the painter's background. He basically knew his name (Brian Fidler) and that he had done some custom work before moving up to Canada. Ron suggested a few ideas, but that's about it.

Looking into the future, Ron is thinking of starting a custom motorcycle business. While he already owns a snowmobile shop and does some bike mods for people on the side, he would like to do something full time. The name? Something with his initials like RB's Customs. Keep an eye out for it. You know I will. **AIM**



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A BIKER'S DOZEN

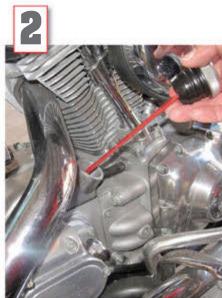
Here's a list of what you should check before taking your first ride of the season

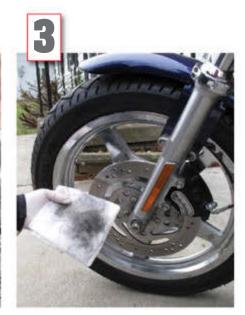
PRING IS HER,E AND YOU'RE READY TO GO FOR THE first ride of the year. But is your bike ready? We thought it would help some of our readers if we gave you a list of what you should check before hitting the starter button and taking your first ride in 2015. This checklist is based on what I've learned in tech school and during my many years of riding, as well as what I've observed of many of my riding acquaintances during group rides.

- Measure the battery voltage. Also examine the battery case for cracks, bulges, and leaks, which, if found, means it's time for a new battery. Examine the battery cables and terminals to make sure they're clean and tight on both ends.
- Check all the oil levels and other fluids and look for leaks. Don't rely on the master cylinder sight glass when checking the brake fluid. Clean the outside of each master cylinder and remove the cover. If the brake fluid is brown or dark yellow, it should be replaced. If it's very low, don't add more fluid before doing item #3 on this list.
- Check your brake pads and rotors. If the brake fluid is low, the brake pads are probably shot. Check to see how much pad material is left. Also check the brake

- rotors for bluing, gouges, and warping. Also check the bolts for tightness.
- Remove the air filter cover and look at the filter element. Insects and vermin have been known to take up residence in air filters. Some filters should be discarded while others can be cleaned and reused, which one you need to do depends on what filter element you have.
- Check the open end of your mufflers for obstructions. Mice sometimes build nests and store food in exhaust systems.
- Inspect the rear drive belt for proper tension and examine every tooth for cracks or other signs of wear.
- Check the tension of the primary chain, unless your year and model bike has an automatic tensioner.







Product Comparo: Bohn Armor Pants vs Kevlar Jeans

ActionStations Boss Paul English talks about the differences in lower body protection options.

Kevlar reinforced jeans are popular with riders of all kinds of bikes.

Draggin Jeans were among the first on the market, and there are now many similar versions available.

Many riders are interested in how these compare to the Bohn Pants.



Q: Paul, please explain the differences between Kevlar riding Jeans and the

PE: In short kevlar has great abrasion resistance and is excellent for gravel rash when you're sliding down the road. With the Bohn System we're focusing more on Impact Protection - the vulnerable 'corners' you land on and damage - knees, hips, and elbows and shoulders with the shirts. An unprotected impact in these places can put you in the ER and off work. And hurts!

Q: But won't your armor grind through in a wreck?

PE: Actually in over 15 years, we've never seen our armor significantly damaged at all! This is because in a crash, we tend to bounce and slide, scrubbing the speed off.

Q:The Bohn System has to be worn under jeans as an extra layer, isn't that hot and a hassle?

PE: Positioning armor snugly against your body is the best way of providing comfortable and discrete protection so that it's in the right place if you have a fall. Yes, it's definitely an extra step compared to jeans - but on the other hand you can then wear your own jeans, or whatever pants you choose. It gives you a lot more options.

O: But isn't it hot?

PE: The only time you notice the Bohn Pants being hot is in the heat of the summer when you're a standstill, say sitting on your bike at a light. At that time of year eveything's hot! Otherwise they breathe really well in all seasons; and we do have options of a mesh shell material and also a winter thermal solution.

Q: What about putting armor into kevlar jeans?

PE: Some companies do have this option, which on first impressions is a good idea. But what actually happens is the armor 'flops' around the outside of your leg as it's attached to the jeans - so you can imagine that it won't be in the right place if you actually do hit the ground.

Q: So do I need to upsize your jeans for the Bohn Pants?

PE: Surprisingly most people find that their existing regular-fit, or relaxed jeans fit perfectly over the Adventure Pants - that's because the armor mainly fits where your jeans are loose.

Q: Don't the Bohn Pants make your jeans look bulky?

PE: No one can see you have anything but your jeans on!

Q: And you make armored shirts too?

PE: We think of the pants and shirts as 'A System' that protects you ithout having to wear full armored gear - specially in the heat.

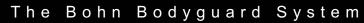
Q: So what's the best choice?

PE: As a lifelong rider myself - I love to have choices in bikes, accessories and gear. Many riders are happy with kevlar jeans, and most are very well made.

We're proud of the Bohn Adventure Pants and the amazing customer reports we get, but everyone has different priorities.

My suggestion is to give us a try We've a great Can't-Lose 90 Day Trial Offer!

And they're made in the USA too.



YOUR PERSONAL PROTECTION SYST



There's nothing better than cruising with the guys 省 on the weekend. Been doing the same for years and it never gets old - there's always something going on or a place to go. And this is how we ride, jeans and denim jacket - unless it's winter anyway.

But now we wear this Bohn gear underneath. Yes it's underneath! You can't see it, and we can't feel it.

I just feel happier when I have some protection these days, though I'm sure we're not going to have a spill.

Check it out - read their testimonials - that's what I did. And they give you a 90 Day Trial too.

Riding seems much more stressfull these days and with this gear we can Relax and Ride, with Peace of Mind!



I am happy to

report my bohn

armored pants

helped save my

this past week-end. Thanks,

great product

testimonial to

their effectiveness

Consider this a

butt in a crash

... terrific product. I crashed at 70mph last weekend and I was barely injured. Your knee pads worked perfectly to cushion the impact. I have some swelling and road rash but not a single fracture. Thank you most sincerely.

They are very comfortable, I forget I even have them on, fit great, and it's great knowing l have the protection under my jeans. Thanks so much.

...your product has made a believer out of me and the select few who ..saw my kamikaze flight through the air. I can only imagine the numerous injuries that luckily avoided by wearing the armor.

Free Bonus for you to keep, just for trying!



fr \$159 Shirts fr \$149

Great

Combo

Savings! up to \$98

...the road littered with gravel...I walked away without a scratch. the bike was not so lucky. I just wanted to say thank you and let you know that your product saved me a lot of pain

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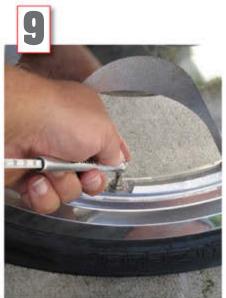
- Blow the horn and run an electrical check. Check the headlight high and low beams. Make sure the brake lights work with the front and rear brakes applied individually. Do all the turn signals work? What about the taillight and any accessory lights? Make sure the four reflectors required by law are on the bike.
- Next on the list are the wheels and tires. In addition to checking the air pressure, check the tread and sidewalls for cracks, cuts, bulges, and signs of dry rot. Are any spokes loose, bent, or missing? Is any part of either rim bent? If you have cast alloy wheels, give them a good looking over for cracks. Check the tightness of both axle nuts and the front axle clamp.
- Check the fuel line for any leaks or signs of cracking. Examine the vapor hoses that are part of the emission control system. Brake lines are reinforced rubber hoses and need to be checked for signs of wear, damage, or leakage. Look at the metal fittings at each end of each brake line for corrosion and signs of physical damage.
- Make sure the clutch plates aren't stuck together before starting the engine. People who don't ride very often sometimes have trouble with sticking clutch plates. The clutch spring presses the clutch plates together and occasionally causes them to stick together after a few weeks or months. A simple test for sticking clutch plates consists of sitting on the bike, pulling in the clutch hand lever, shifting the transmission into gear, and then rolling the bike forward and backward a foot. If the bike rolls freely, the clutch disengaged, the

clutch is probably stuck. Grabbing and releasing the clutch lever a few times may get the clutch to release. If that doesn't work, try rocking the bike back and forth a few times with the clutch disengaged and the transmission in second gear.

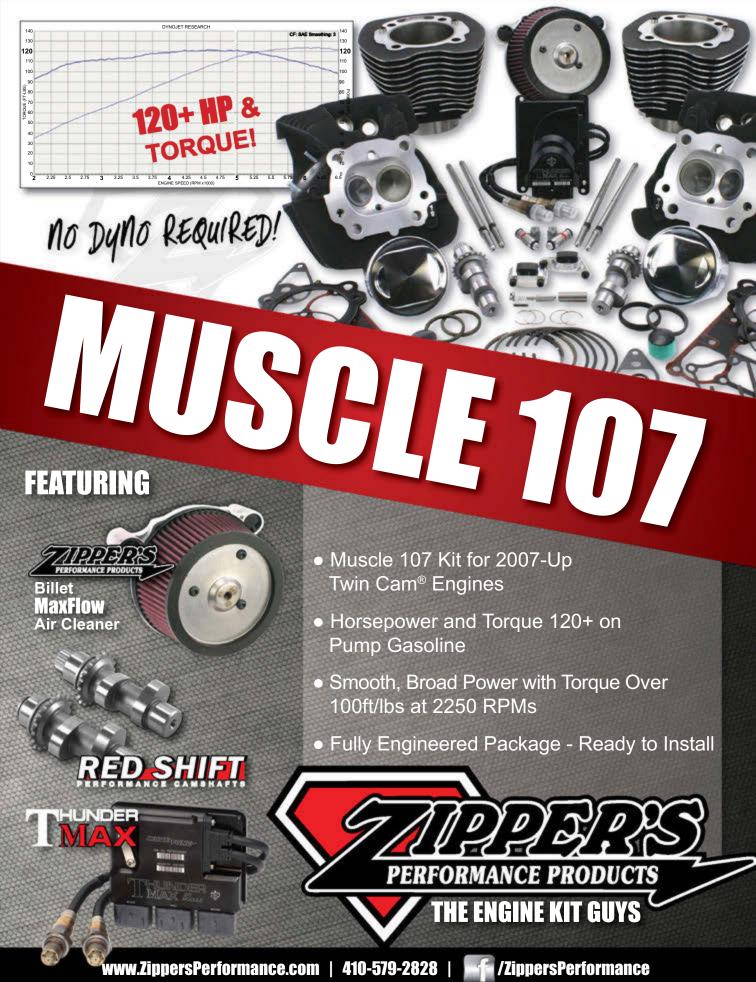
Don't forget the paperwork! Check your insurance policy to make sure it hasn't expired. The same goes for the bike's registration and inspection sticker, if your state issues one.

Once you're out on the local roads, check out your riding skills. No matter how well you rode last year, if you haven't grabbed a throttle in a few months, your riding skills may be a little rusty. For the past 27 years I've made an early morning trip to a large parking lot less than a mile from my house at the start of every riding season. Once there, I practice turns, figure eights, quick stops, and countersteering. If you feel you're still not up to speed, consider taking a riding skills course through the Riding Academy at a Harley-Davidson dealership or a community college riding course offered under the auspices of the Motorcycle Safety Foundation (MSF). AIM









Here's my 2009 Dyna

Fat Bob up on Jim's

lift with the seat and

moved. The rear of

the bike is lifted with

a bike jack, and Jim

has a board under

the tire and over a

rod, which he'll use

later on to lift the

wheel.

both shocks re-

FAT BOB SUSPENSION UPGRADES

Part I: Progressive Suspension 430 Series rear shocks

T DIDN'T TAKE LONG FOR ME TO DISCOVER THAT THE stock suspension on my 2009 Dyna Fat Bob left a lot to be desired. This bike is a muscle cruiser, and I like to ride it as intended: hard and fast. That said, I don't like to feel every bump in the road, and I really don't like being jolted out of my seat!

I've made a few other improvements to make the ride more enjoyable and the bike more sinister through contrasting black and silver design elements. So when I went shopping for shocks, my eyes caught Progressive Suspension's heavy-duty 430 Series Shocks that are offered in chrome or contrast-cut. The high-pressure gas monotube uses deflective disc damping for a high-performance ride. These shocks can be mounted either rod up or rod down, and are preload adjustable by hand. The 430 is offered in a few sizes for the Dyna. Since I regularly touch down the Fat Bob's footpegs, I thought I'd go with a little more length, so I ordered the 1/2" longer than stock 12-1/2"

shocks (#430-4048B/\$499.95). Since I'm installing longer than stock shocks, both the stock shocks must be removed from the bike before the new ones can be installed.

I didn't realize at first that I'd mistakenly ordered the heavy-duty shocks.

TOOLS NEEDED

- Blue Loctite
- 3/32" Allen
- 5/16" Allen
- 3/4" box wrench
- 36mm socket
- 3/4" socket
- 1-1/8" socket
- Torque wrench (ft-lbs.)





Jim prepares the new shock for installation by inserting the two supplied shouldered sleeves in each eye. It was a really tight fit, so Jim used a little silicone lube and his vice to carefully press the sleeves into place.



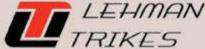


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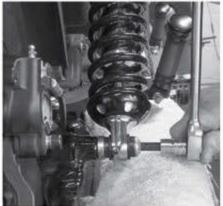




Jim slides the stock bolt with washer through the upper shock eye, the saddlebag support bracket, and washer that were previously removed. He then puts some blue Loctite on the bolt's threads.



Jim attaches the top portion of both Progressive shocks to the frame using a 3/4" socket and 3/4" box wrench. Jim then checks that the new shocks have proper clearance from the frame, belt guard, and brake calipers.



bolt, Jim lifts the board to position the wheel so he can thread in the bolt using a 5/16" Allen.

Note the towel covering the chrome exhaust to protect it from possible scratches.

On the left side, Jim attaches the lower end of the shock using blue Loctite, a 3/4" box wrench, and a 5/16" Allen. He then torques both bottom bolts to 30-40 ft-lbs. and the upper bolts to 30-40 ft-lbs.



After lowering the bike off the scissor jack, I sit on the bike as Jim checks the belt tension. He discovers that the longer shocks have changed the position of the swingarm enough to make the rear drive belt too loose.



After he removed the decorative axle nut cover and axle circlip, Jim loosens the axle nut using a 36mm socket on the left side and a 1-1/8" socket on the right.

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Jim then moves each axle adjuster screw a quarter turn using a 5/16" Allen to get the right amount of tension on the belt for this year and model bike.



After he torques the axle nut to 95-105 ft-lbs. using a 36mm socket and 1-1/8" socket, Jim pushes the stock circlip back onto the axle.



Jim finishes the job by reinstalling the beauty cap using a 3/32" Allen.

The 430's standard spring rate is good for riders that weigh up to about 220 pounds, which would suit me. Heavier riders or riders that regularly carry passengers should consider the heavyduty spring rate. While neither of these situations apply to me, I had Jim Hamlin of Hamlin Cycles in Bethel, Connecticut, install the heavy-duty ones anyway, and I'm happy with the boost in performance and comfort level.

The 430s are built to last and come with a limited lifetime warranty, but Progressive expects most riders to get about 50,000 miles out of them. However, if you manage to wear out your shocks, Progressive will replace them.



The contrast-cut, black-anodized finish of the Progressive Suspension 430 Series shocks match the Fat Bob's sinister look perfectly! But even better, they deliver much better performance. AIM

SOURCES

HAMLIN CYCLES

203/942-2232 HamlinCycles.com

PROGRESSIVE SUSPENSION

877/690-7411

ProgressiveSuspension.com



Here's our 1973 Iron-

head Sportster on

Jon's lift. Jon has

already taped a 5/8"

OD rubber hose onto

the top of the front

tire to properly space

tire for tire growth at

the fender from the

highway speeds.

SHEET METAL MAGIC I

The Perewitz crew shows how to widen and mount a new front fender blank

ORKING ON YOUR OWN HARLEY PROJECT can be one of the most stressful, yet most rewarding, endeavors you can undertake. The enjoyment only increases as you complete new challenges. One of the bigger undertakings that a garage builder can attempt is sheet metal work. If you've never done it before, it can certainly sound scary, and that's why we headed over to the experts at Perewitz Cycle Fab for a crash course.

Our project: Chris' 1973 Pro-Street Ironhead with a hopped-up, 82" big-bore stroker engine. It's a long-term build that readers may have seen from time to time, and, with the Ironhead Sportster's recent resurgence in the motorcycling world, we figured it's the right time to finally get this thing finished up.

This month, we're going to start off the sheet metal series with a Russ Wernimont Designs (RWD) fender that Dave Perewitz found on a dusty shelf in his shop. The front tire on our Ironhead is wider, however, so widening the old fender will also have to be taken care of. RWD happens to make the correct-width fender for this setup, but we decided to save some cash and go with this one. Plus, it allows Cycle Fab to show us the technique to widening (or narrowing) a fender, which you may have to do if buying parts

at a swap meet. One of the best parts about working with sheet metal is that you can custom-tailor it to fit your project.

Like most of our tech articles, which are step-by-step, how-to pieces, the goal here is to give our readers the knowledge to do similar work on their own bikes. If you have even a little bit of

TOOLS NEEDED

- Tape
- Scribe
- T-bar
- 5/8" OD rubber hose
- Black marker
- 36-grit wheel
- Fine file
- Welding clamps
- Roller bars
- Scotch Brite wheel
- Hammer and dolly
- Air-powered wheel
- Bandsaw
- TIG welder





Jon must first test-fit the RWD fender Dave had around his shop to the front wheel. It's a bit too close to the sides, so he will start the job by splitting it down the middle to add 1/2" to its width.



The first step is to mark the centerline, which is usually the weld joint, using a black marker. This makes it easier for Jon to see as he cuts the fender in half. He then runs some tape along the line for the same reason.



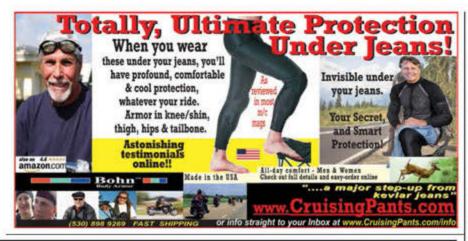
Jon uses a bandsaw to split the fender right down the middle. He then uses an air-powered wheel with 36-grit sandpaper to smooth out the cut on both fender halves.

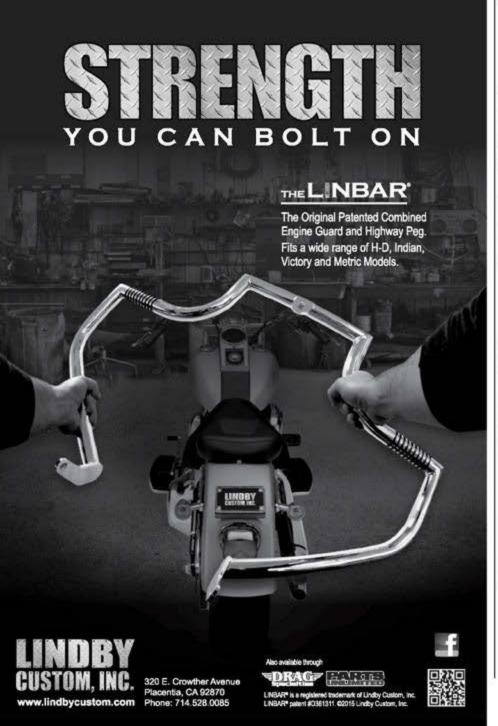


After cutting a 1/2" wide strip of 14-gauge steel, Jon puts a curve into it using a set of roller bars, so it matches the curve of the fender.











After clamping it to one of the fender halves,
Jon butt-welds the strip to the fender using a
TIG-welder. He does this by tack-welding the
strip every inch, starting at the center and
working his way out to the ends.



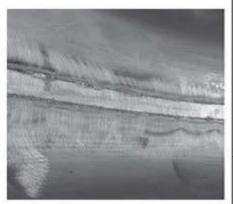
After he welds the other fender half to the strip in the same manner, Jon grinds the welds down using an air-powered wheel fitted with 36-grit sandpaper.



Rather than sand the welds and fender down to the lowest spots, Jon uses a planishing hammer to bring the low spots even with the rest of the fender to keep the welds as strong as possible. You can do the same with a hammer and steel dolly.



After sanding and hammering the fender a few times to get it as smooth as he can, here's what the top of the fender looks like now.



Here's what the underneath looks like. You can see the two beads of weld and the 1/2" strip he welded in very clearly.



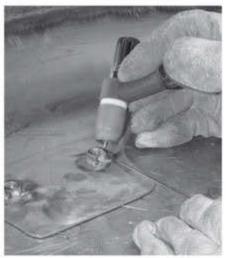
Jon then positions the fender on the front end and marks where the lower leg tabs are on the fender using a black marker.







Jon measures and finds the center line between the outer marks and then scribes a line using a steel pick tool and T-bar.



After drilling all four holes using a 5/16" drill bit, Jon tacks 5/16"-18 nuts on the inner face of the fender mounting tabs. He welds each nut in four spots.



After he makes a scribe line, Jon cuts off the excess steel. He starts in the center of the scribe line, cuts all the way through, and then works his way to one end. He then does the same to the other end of the mounting tab.



Jon uses a micrometer to measure the distance of the inner edges of the holes, then adds half the diameter of each hole to get the center of each hole.



After Jon makes a scribe mark on the fender a little lower than the mark showing where the lower leg mount ends, he uses a 1" pipe to make the arc that will tie the two edges together.



Using a grinding wheel with a 36-grit pad, Jon shapes the rounded edge between the two lines.



Jon then measures over from the centerline that distance and marks where to put each fender mounting hole. He then does the same on the other fender mounting tab.

WHEN SMOOTHING OUT THE

TIPS &

TRICKS

welds for the center strip, once the heavy grinding and hammering is done. Jon uses

ing is done, Jon uses a fine file to smooth out the grinding marks and identify where the last few low spots are. The

more time you spend smoothing out the fender the less bodywork will be needed to do the same thing. And steel is much stronger then body putty.



Jon then cleans up all the edges and surfaces with a Scotch Brite wheel.









artistic ability and basic hand tools, you can do everything shown here, it will just take a bit longer. For example, instead of a bandsaw, a hacksaw will work just fine. And instead of a planishing hammer, you can use a hammer and dolly. You'll also see a heavy-duty welder being used, but a small, household one that operates on 30 amps will work fine as sheet metal is thin. Christested one from Lincoln Electric that he loves for around the shop use.

Because each metal part on a motor-cycle requires a different process, we're going to show each one separately. Over the next three issues, we're going to mount up another found-at-Cycle Fab part, a split Fat Bob gas tank that's been welded together and works perfectly on this fuel-sucking hot rod. After that, we'll fit and modify a new oil tank from Paughco and a new rear fender with built-in taillight from RWD.

Taking us through this project at Perewitz Cycle Fab's new facility in Halifax, Massachusetts, is fabricator Jon Sniger. Follow along with the accompanying photos and captions as Jon takes us start to finish through the fabrication and proper fitment of a front fender on our Pro-Street Ironhead.



Here's how the fitted RWD fender looks on our Ironhead project! AIM

SOURCES

PEREWITZ CYCLE FAB

508/697-3595 Perewitz.com

RUSS WERNIMONT DESIGNS

951/698-9495 RussWernimont.com





NEUTRAL RATTLE, CABLES & GREASE DRIPS

Does your Cruise Drive six-speed have a rattle when the engine is idling and at normal operating temperature? This is a normal condition that's caused by the amount of clearance between the teeth of the first gear pair (arrows). If the fit of these two gears is on the loose side of the specification, the gears will rattle when there's no load on them.

Just wondering if you've heard of the Harley neutral knock .I just bought a 2014 Ultra Classic that has 1,400 miles on it. I have a rattle when the engine is idling and at normal operating temperature. My dealer tells me it's normal. I'm just really disappointed in The Motor Company for knowing about this problem and doing nothing about it. Looks like this is the last Harley I'll own. All the hype with this RUSHMORE project, but no fix on a problem it's known about since 2007.

LARRY T Via Internet

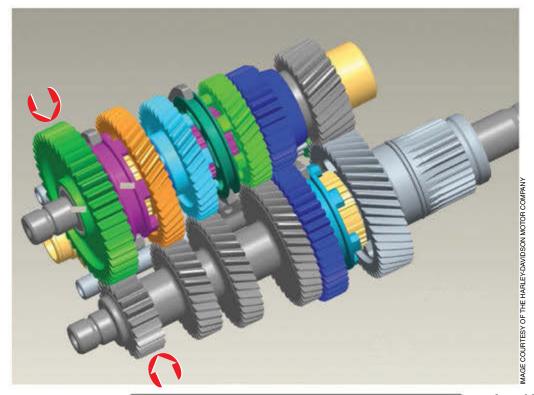
Harley refers to this condition as neutral rattle, and your dealer is correct: it's a normal condition on the six-speed transmission. The cause is the amount

of clearance between the teeth of the first gear pair. If the fit of these two gears is on the loose side of the specification, the gears will rattle when there's no load on them. The clearances vary because of manufacturing tolerances in the parts of the transmission. Slight differences in gear sizes or the distance between their shafts will make the fit tighter or looser. If you pull the clutch in, the noise goes away because the transmission stopped spinning. The rattle isn't a problem, causes no other issues, and doesn't have any effect on

the long range performance of the motorcycle. I've tried using heavier oil in the gearbox of my Street Glide and found it didn't change much. The rattle depends on the clearances on each individual transmission. Bel-Ray or Drag Specialties have good gear oils if you want to try one at your next oil change. Harley doesn't recommend or approve any oil other than its Formula Plus and SYN3.

When I purchased my 2012 Ultra Limited new from the H-D dealership, I had the dealer install a new H-D Road Tech zumo 665 GPS. Though everything works fine, I don't like how the audio cable from the GPS is connected to the radio. The dealer routed the

audio cable through the fairing, then out between the oil pressure gauge and the inner fairing, then to the Aux input on the front of the radio. I have a



To submit a question to our H–D–certified mechanic, who has been working in dealerships for over 20 years, send in as much info about the problem and bike as possible to Hog Helpline, c/o American Iron Magazine, 1010 Summer Street, Stamford, CT 06905, or e-mail ChrisM@AmericanIronMag.com. Sorry, but due to volume, we cannot respond to requests for personal replies or to all letters.

friend who purchased a new 2013 CVO Ultra Classic Electra Glide. The audio from his Road Tech zumo 660 GPS, which comes stock on the CVO, is wired to the back of the radio. Is there a module or cable I can purchase and install for my radio that will clean up and move the connection between the GPS and radio to the back, like on the 2013 CVO?

DAVE OTIS

Minneapolis, MN

Harley offers the Navigation Interface Module (#76000024A), which will give you the integrated link to your radio you're looking for. Music volume will be automatically lowered when the Navigation comes on with spoken directions. The Navigation audio can be heard in the speakers or headset. The module and wiring are all hidden in the fairing. Your 665 has XM and MP3 capabilities, too. The interface kit comes with a jumper cable to attach these outputs to the Aux connection on the radio. You'll still see a small length of cable to the radio. However, if the cable is run

carefully and neatly, it's hardly noticeable and well worth the trouble to get the full features of your 665.

I have a question relating to the grease that H-D uses to lube the steering head. I live in southern Texas, where it gets pretty warm in the summer. I have a 2007 Softail Classic, and I have it serviced every 5,000 miles. The problem is that when I'm riding in warm weather, the grease breaks down and loses viscosity. This causes the grease to leak out of the bottom of the steering head and slobber all over the front of my bike, pants, boots, etc. While it's a pretty bluish green, it's hard to wash off. My dealer told me that this is common because Harley hasn't been able to develop a lubricant that will hold its viscosity in hot weather. Is this true? That would seem strange given H-D's extensive R&D department. Is there a fix?

MIKE FLEMING

Via Internet

Mike, the problem isn't the grease itself but the amount of grease used. If you look at the grease

fitting in the frame, you'll see that you need to pump the neck full of grease before any gets to the bearings. The book says to lubricate the neck bearings, so the dealership tech pumps in grease until he sees a little of it squeeze out of the bearing. By that time he's pumped in half a tube! And he does this at every service. You know the rest. Believe me, this isn't just a hot weather issue. I've seen the grease dripping out of bikes sitting on the showroom floor in the winter. Harley also makes a special neck bearing grease that is gold in color and just as messy when overused. The only thing to do is keep wiping the extra grease off the lower fork bracket before it blows all over the bike and make sure your tech doesn't grease them again. The grease that's in there will last a lifetime at this point. The only alternative would be to disassemble the front fork and clean the excessive grease out of the neck. This will be expensive, so I would suggest waiting until you chrome the forks or change the fork oil the first time. AIM





More Ironhead Clutch Issues & Brake Fluid



My recommended high-performance upgrade for the late

1957-69 Sportster clutch

the clutch shell to reduce

setup includes drilling

weight and improve fluid flow through the

clutch plates.

Dan, I have a 1966 kickstart Sportster, and I want to upgrade the clutch or, if possible, install the 1966-67 electric-start, double-bearing clutch shell. The stock clutch I have now wobbles even with the new bearing race installed, and I can't keep the clutch plates dry for more than a few months. I hope you can help, seeing as I love the bike, but the clutch is becoming a real problem.

DAVE WOLLSCHLEGER

Via Internet

This is a continuation of the clutch upgrade we • discussed two issues ago. This time we're going to cover high-performance upgrades for the late 1957-69 Sportsters. The last clutch you asked about is the electricstart 1967-70 double-bearing unit, which is a heavy-duty setup that works very well in all serious Pro-Street or gasoline racing applications. This isn't something you'll want to do unless you really need it, since the parts needed are expensive and some of them are obsolete, so you'll have to find good used or NOS ones. I strongly recommend that you never use any imported parts for this upgrade in high-performance applications. I've personally experienced failures with imported parts. Here are the parts you'll need to upgrade to: clutch hub (#37557-67), clutch shell (#37700-67), clutch hub nut (#37527-67),



I also apply the drilling upgrade I do to the clutch shell to the inner clutch hub for the same reasons.



I also replace the stock fiber clutch plates with segmented Barnett wet clutch plates and either three or six Barnett MT-53-6 clutch springs, depending on the application.

left clutch release rod (#37280-67), transmission clutch gear (#37448-67), and longer transmission mainshaft (#35046-67). Of course, the transmission has to be removed and disassembled to install these components.

After all the parts are found and in your hands, I recommend sealing the primary drive case as discussed in my last column. Next, we at D&S Performance turn this into a wet clutch assembly by drilling the clutch shell and inner clutch hub to reduce weight

Got a question about a problem on your Sportster? Send your query, with as much info on the bike as possible, to American Iron Magazine, Sportster Corner, 1010 Summer Street, Stamford, CT 06905, or e-mail it to ChrisM@AmericanIronMag.com. Sorry, but due to volume we cannot respond to requests for personal replies or to all letters.

and improve fluid flow through the clutch plates. The last things we do are reinforce the pressure plate slot where the left clutch rod seats, and replace the fiber clutch plates with segmented Barnett wet clutch plates. After all the modifications are done, we do a normal reassembly using three stock and three Barnett MT-53-6 clutch springs for general street use. I use all six Barnett MT-53-6 clutch springs for higher horsepower or more aggressive applications. The photos shown are of the Pro-Street clutch for my personal 1966 102 hp streetbike. If you have a special application, call me at the shop as there are a few high-quality aftermarket racing clutches that were made by Bandit and ART that can still be found occasionally.

On page 118 in your last column, the answer to a question regarding brake fluid contained an error. You referred to all glycol-based fluids as hydroscopic. This is a common error. Those fluids are actually hygroscopic. Moisture created does mix with glycol-based fluids while

moisture generated in a silicone-based fluid system remains separate from the fluid. In extreme situations, a vapor lock could occur due to this situation. All brake systems will generate moisture due to the heating and cooling of the system. Routine checks, be it in a glycol-based or silicone-based system, are recommended. I spent many years as a brake fluid product manager for a major US manufacturer, so I have many times seen the words hydroscopic and hygroscopic incorrectly used, so pardon my critique of a great magazine.

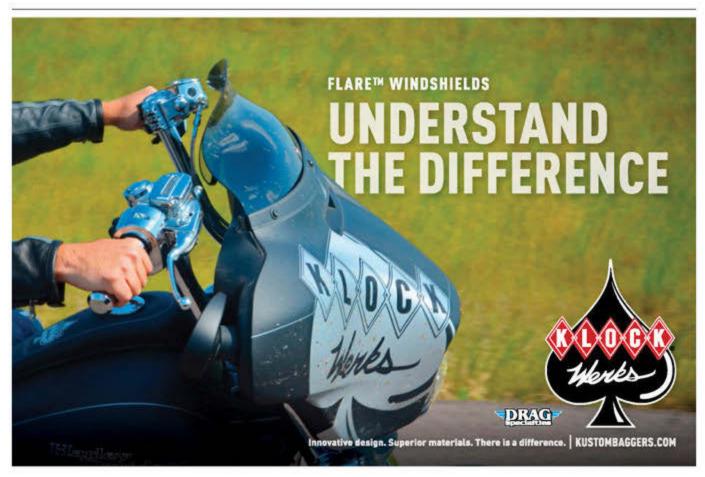
RICHARD KROEGER

Via Internet

Richard, your correction to my brake fluid article really intrigued me since I have printed material that says brake fluid is hydroscopic. The problem is you sound like you know what you are talking about, so I went looking for confirmation either way. I first looked in an engineering terms dictionary, and it said a hygroscopic substance has the ability to readily attract and hold water molecules from the surround-

ing atmosphere. Hmm, sounds about right for brake fluid. I next found a reference in a medical encyclopedia that stated hydroscopic is the ability of a solid to hold water moisture. Kind of the same, but not exactly (no wonder people confuse them). The icing on the cake was a service bulletin from Nissan that advises using DOT 3 fluid and states "Remember brake fluid is hygroscopic. This means that it has no moisture in it. So after months and years of operation, the brake fluid will attract water out of the air." Now water will go to the bottom of the system, which then allows the water to corrode your calipers, etc. It also warns that brake systems with water in them will become soft or fail because the water turns to steam under hard usage (hot rotors and calipers transmit a lot of heat). So I have to say from my research, Richard, you're correct, and thanks for improving my knowledge

> Dan Umstead D&S Performance Lake City, PA



H-D EQUIPMENT BAG

A highly functional and sturdy bag with lots of zippered pockets and compartments

LET ME START BY SAYING THIS IS A BAG FOR HARLEY RIDERS, but it's not a bag I'd want on my Harley. It's big and roomy and has extendable handle and rollers, which make it great to move your riding gear between the rides. But it's too big to strap on a bike — at least I wouldn't try to!

When planning for my 4,200-mile Motorcycle Cannon-ball ride last year, I needed a sturdy bag to haul my gear and change of clothes for 17 days. After riding a few hundred miles every day on a 1936 Harley, I want my stuff easy to access and move to my hotel room every night. This bag

(#99410-15VM/\$165) was an excellent way

to do it in style.

All the Harley-Davidson logos and Bar & Shield designs are a bit more than I'd prefer, but the bag works well for what I needed. It's sturdy with lots of zippered pockets and compartments in and on the bag. It can easily swallow a full-face helmet, leather jacket, and my riding gear with room to spare. The bag is highly functional with a pull-out handle on top and set of rollers on the bottom and plenty of adjustable nylon straps for added security and strength.

My one concern is that I would never check this bag at an airport. Having heard horror stories regarding luggage security, I'm convinced this bag, screaming Harley-Davidson, might not make it to my destination with the contents intact. But it's perfect for hauling stuff in the truck or trailer. **AIM**

SOURCES

HARLEY-DAVIDSON MOTOR COMPANY

Harley-Davidson.com

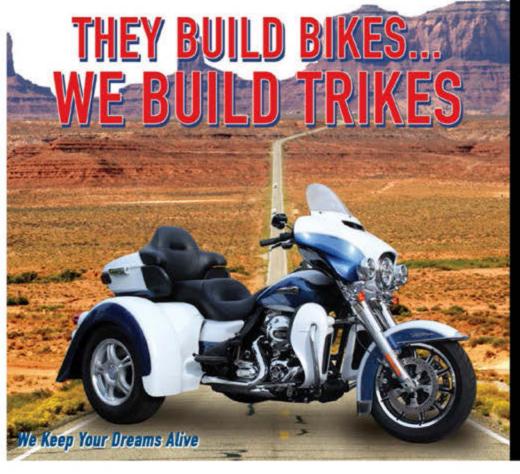
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traps moisture. Next thing, corrosion starts. S100° Total Cycle Cleaner is the answer. Its creeping power can get to places you can't reach or even see. Then its penetrating action zaps even the toughest stains. (It's even got a corrosion inhibitor so it washes safely.) Ordinary washes and cleaners can't do all that! No wonder it's been the favorite of bike makers themselves for over a generation. Protect your expensive investment with the best cleaning it can get! Find it at your Harley-Davidson® Dealer.

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SHIFT FORK GAUGES

JIMS offers quality versions of these important tranny tools

LIKE A DUMBASS, WHEN I CLOSED MY CUSTOM BIKE SHOP back in the mid-1980s, I sold off some of my specialty Harley tools. I was changing careers (aircraft mechanic) and felt I didn't need them anymore. Two of those tools are the shift

fork gauges you need to rebuild the four-speed transmissions found in Shovels, Panheads, and Knuckles. After borrowing them from friends for the last 20 years, I finally stopped being cheap and bought new ones from the guys who make any tool you need for a Harley, the crew at JIMS.

As you would expect from JIMS, these tools are high-quality, fit correctly, and work just as they should. A shift fork gauge is used to properly position the shifter forks so the shifter clutches they control are where they should be when the

tranny is in neutral. If the shifter clutches aren't properly positioned at this shift position, then they won't be able to fully engage one of the gears they control when you shift through the gears. Result: the tranny pops out of gear when under load.

The blue tool is for the plate-type (cow pie) shifters found on all 1979-86 Big Twin four-speeds (96385-78A/\$135.05). The beige version is for the drum-type shifters found on all 1939-78 Big Twin four-speeds (#96384-39/\$125.85). Full instructions are available from the JIMS web site. We'll be using the beige tool when I finally show my daughter how to rebuild a Panhead tranny for our family bobber build. **AIM**

SOURCES

JIMS 805/482-6913 JimsUSA.com







Pictured (from left to right): Rinehart Racing® End Caps Merge, Slot, Castle Available in 3.5° and 4°

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SUNJACK CHARGER

A solar charger you can take anywhere

DO YOU LIKE TO CAMP OUT BUT STILL NEED TO STAY connected? The 14-watt SunJack Phone (\$159.95) has got you covered! This lightweight, portable solar charger will keep your smartphone, MP3 player, or just about any other small electronic device that gets recharged via a USB port fully juiced and ready to work.

The SunJack's four-panel solar charger folds into an easy-to-carry 9" x 6-3/4" x 2" package. To use, just unfold the panels, lay it out in direct sunlight (it also works on a

cloudy day, but not as well, of course), and charge the device you want directly via let 1) or 2-amp (Output 2) USB ports. Or you can charge the SunJack's included battery pack and use that to fully charge your

either the unit's 1-amp (Outdevice at a faster rate. I used

the battery pack to recharge my MP3 and smartphone many times before the battery itself needed to be recharged. Need to power a tablet, etc.? SunJack also makes a 20-watt version for these devices.

I also got the optional SunJack CampLight USB Bulb (\$14.95, not shown). This LED bulb setup gave enough light for my 60-year-old eyes to read at night for over 10 hours on one battery charge. This was the only time I ran the battery down until it shut itself off. But before it did, two of the five battery charge indicator bars flashed for about five minutes before it shut off to protect the lithium battery.

The SunJack is a great device to have with you on the road! **AIM**

SOURCES

SUNJACK 888/415-7849 SunJack.com





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OVERHAUL PROJECT I started the overhaul project on my 2008 Street Glide. It has Renegade Monterrey wheels, 26" front and 18" rear, Performance Machine grips, Bagger Concept 6-1/2" Focal speakers in the fairing with the amp and lids, plus 6" x 9" speakers in bags, a Paul Yaffe stretched tanked with a custom LePera seat, Arlen Ness mirrors and air intake cover, and Dirty Bird Concepts front fairing, 14" handlebars, stretched bags, bag latches, floor-boards, rear pegs, and trunk. John Martin did the custom paint job and custom-built the rear fender, chin spoiler, horn cover, and exhaust 2-into-1 pipe (one-off pieces).

> **JEFF LLOYD** Center, TX



Got a bike you think belongs here? If so, send a few high-resolution (300 dpi at 8" x 8" minimum) images to Letters@AmericanIronMag.com or American Iron Magazine, 1010 Summer Street, Stamford, CT 06905.

PERFECT PAIR









IN LOVING MEMORY I recently subscribed to AIM after getting back into riding following a 34-year break from riding to raise my family. I ride a 2006 Harley Sportster. My father, Ambrose, rode an Indian Scout. He was from Vankleek Hill, Ontario, Canada. Dad would have been 91 this year.

> **RAY PILON** Via Internet

See a picture of Ray's father, Ambrose, astride his Indian Scout in Memories on page 154.



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POLE DANCING For Mom's 93rd birthday, we rode out to Monte Carlo in Hancock, Michigan. My mom rode on the back of my 1985 FXRT, my brother Jim was on his 2002 springer, and my sister Sharon rode her 2001 Sporty. After about three hours and a few beers, we had to get her home because she started talking about doing pole dancing. Maybe next year, Ma.

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THE GREAT NORTHWEST Mt.

Adams in Washington is another one of our active volcanoes. I rode there with my wife on Black, my 2005 FLSTCI, during a beautiful September weekend. Black has a 103 stroker kit, Screamin' Eagle pipes, and Screamin' Eagle intake. It can produce 95 hp and 103 ft-lbs. of torque (good for a type B). I love this bike, I love these roads, I love life, I love this mag, and I love my wife for ridin' two-up, supporting my decisions no matter how crazy. She is always up for adventure!

CHRIS "WOODMAN" WRIGHT
Via Internet





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COUNTRY, FREEDOM & HARLEY En route to the 74th annual Sturgis Rally, my friend Jim and I stopped on the side of the road to take in the scenery. We both talked about how lucky we were to live in a beautiful country that affords us the freedom to pursue our passion for riding and how grateful we were to our Harley-Davidson technicians for their expertise. Our bikes purred like kittens for the 4,362 miles we rode. So, thanks to our country, freedom, and Harley-Davidson for a most memorable trip to Sturgis and back! An article about me reuniting with an old friend was featured in the May 2012 letters section of *American Iron Magazine*.

Via Internet



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NORTH TO ALASKA For more than a decade, a group of us has ridden numerous miles to destinations throughout the United States and Canada. Recently one member had a burning desire to travel to Alaska since we've been to nearly all of the lower 48 states. We decided that now was a good time to attempt this once-in-alifetime excursion. Three of us accepted the challenge, including (from left to right) Lee Johnson, Dennis Boik, and me. Our destination was Fairbanks, Alaska, and, ultimately, Denali National Park. We successfully completed the 8,000-plus-mile trip, traveling through six states and five Canadian provinces in 19 days. We will never forget the wonderful sights and how fortunate we were to complete such a journey.

> LEN SCHULKE Austin, MN AIM



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Three Garage Specials

American Iron Magazine is publishing three all-tech American Iron Garage specials for 2015.

The first one goes on sale April 7!



AIG specials are newsstand-only magazines, so check us out at your local newsstands including Walmart or Barnes & Noble. For more information visit AlMag.com or our Facebook page. Garage and other back issues available at GreaseRag.com.



Add Some Copper

Renegade Wheels now offers all of its wheels — every style and size — in a new copper finish. A metallic compound topped with a durable clearcoat keeps maintenance to a minimum; the copper finish adds \$200 per wheel to the regular price tag. Info: Renegade Wheels, 714/998-7241, Renegade Wheels.com.



Internal Discs For Softails

SuperTrapp's internal disc series provides a bolt-on performance gain of 10-15 percent more horsepower for Softails. A chrome body with fishtail or taperedslash end caps is included with specific models, and the core and packing are rebuildable. There are different versions of the internal disc series with a varying number of 3" discs. The 2:1 system has 18, the 2:2 crossover system and slip-ons have 24, and the 2:2 staggered duals system includes 36. SuperTrapp also offers an internal disc series for baggers and Dynas. From \$789. Info: SuperTrapp Industries Inc., 216/265-8400, SuperTrapp.com.



Handlebar Tunes

Want tunes while riding? No fairing? No problem! KICKER's new PSM3 mini-enclosed speakers are weatherresistant and mount directly onto any handlebars. Handling 50 watts RMS while adding little weight to the front of your bike, the full-range 3" pair is loaded in durable, high-quality chrome-plated enclosures. An arm and clamp attached to the enclosure locks onto handlebars with single-point mounting to resist vibrations. Info: KICKER, 405/624-8510, Kicker.com.



Long & Short

R&R Cycle offers its 124" Twin Cam engines in two forms, long blocks and short blocks. The long block is ready for your covers and throttle body, and the short block can be used with your heads and valvetrain. Short block, \$3,999; long block, \$6,999. Info: R&R Cycle Inc., 603/645-1488, RRCycles.com.

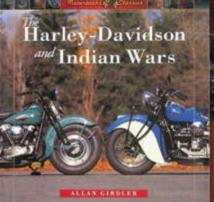
All claims and specifications are those of the manufacturers. Submissions are welcome and should include a color digital (300 dpi jpeg) image, detailed description, and suggested retail price. Send submissions to Widgets, American Iron Magazine, 1010 Summer Street, Stamford, CT 06905, or Widgets@AmericanIronMag.com.





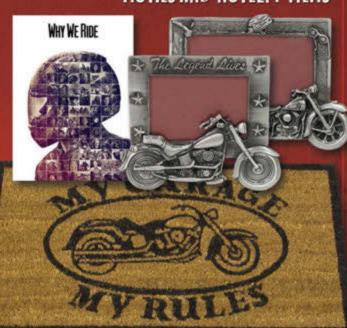
MOVIES AND NOVELTY ITEMS







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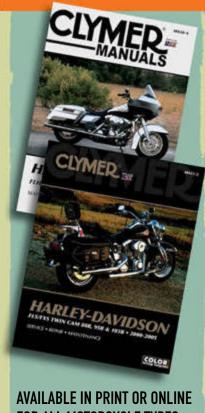






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By-By, Motorcycle Bagger

Unfortunately, we had to merge our sister publication, Motorcycle Bagger, with American Iron Magazine. The last installment of *Motorcycle Bagger*, the April issue, hit newsstands a few weeks ago on March 3. If you didn't have a chance to pick it up, or can't find it, check it out, along with all back issues of Motorcycle Bagger, by going to our GreaseRag.com site. Let's celebrate a wonderful rag together. It was a great ride, folks! \$6.99. Info: GreaseRag.com.



Curvy Lights

Bad Dad's 992 taillights are CNCmachined from billet aluminum for strength and durability and are milled in the US. Each kit comes with a set of custom LED lights and a curved radius. The taillights are 10" l x 1-5/8" w; they're available in black powdercoat and chrome finishes. An additional plug-'n'-play wiring harness with load equalizer is also available. Info: Bad Dad, 260/407-2000, BadDad.com.



Double Cover

Drag Specialties has die-cast aluminum spark plug/head-bolt covers that not only fit over the entire headbolt and spark plug base, but accent the head area. Complete with all of the required hardware, the kit fits 1999-2015 Twin Cam models and is available in smooth chrome. \$61.95.



Info: Drag Specialties, Drag Specialties.com.

Saddle Up Your Street

Corbin's Gunfighter & Lady saddle for the new Harley-Davidson Street 750 and 500 models is sculpted to disperse body weight across a greater area while its neutralized seating platform curbs the tendency to slide toward the tank under braking, which also reduces fatigue. The Gunfighter & Lady accepts Corbin's optional removable



backrest (\$218 each). A glove box-only version is also available in black. Glove box only, \$359; full saddle, \$393. Info: Corbin, 714/280-8537, Corbin.com.



info@Ironbraid.com





Tour Like A Pro

Featuring various designs including Tactical White and Tactical Green Frost graphics, the Signet-Q Pro Tour helmet comes pre-equipped with Arai's Pro Shade system, plus a water-repellent Eco-Pure anti-microbial liner that keeps the helmet fresh over long rides. Info: Arai Helmets, 610/366-7220, AraiAmericas.com.

Cool Off!

Using a combination of advanced textiles and a standoff bracket design for cooling and heat dissipation, DEI's ONYX series flexible heat shield features two layers. The outer layer is made from heat-treated glass fiber impregnated with molten aluminum, which is formed into a tight weave.





The inside material is made of a specially treated, high-temperature-resistant fabric that's 89 percent silica and capable of withstanding extreme exhaust heat up to 1,350 F. The outer edge has a surge stitch for improved durability. The shield measures 4" x 8", and all the hardware is stainless steel. \$44.95. Info: Design Engineering Inc., 800/264-9472, DEIPowersports.com.



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Fix Your Harley

S&S Cycle's new Stock Replacement Parts Catalog is now available on its web site for viewing or downloading. Whether you need to fix your Harley or get new parts, the catalog includes details on S&S products for late-model Harley engines and Flathead Power components for vintage Harleys. Info: S&S Cycle Inc., 866/244-2673, SSCycle.com.



Heads-up Helper

The Energizer Hard Case Professional headlight (retail \$53.99) is now a lot brighter than before. This particular model features 160 lumens (previously 70 lumen max output), which is a 129-percent boost. The water- and impact-resistant light is in a housing that pivots to direct the beam where needed, making it convenient for roadside repairs or for rooting through your saddlebag for gear. Complete with a flip-up lens, a removable third strip, and a rear-mount battery pack, the Hard Case Professional features four light modes: high and low white beam, red for night vision, and green for inspection work. The light reaches up to 124 meters and lasts up to eight hours on three Energizer MAX AA batteries. Info: Energizer, 800/383-7323, Energizer.com.







Heavy-Duty Batteries

Yuasa's GYZ series line includes six factory-activated, maintenance-free, Absorbed Glass Mat (AGM) batteries for heavy-duty V-twins. With 500 CCA and 32 AH, the GYZs offer increased power and longer shelf life. The large, heavy-duty, flush terminals on the GYZ32HL, GYZ20HL, and GYZ20H models have multi-

ple connections on the front and top. Additionally, the built-in-brass nuts deliver up to 50 percent of improved conductivity than stainless steel. Info: Yuasa Battery Inc., 866/431.4784, YuasaBatteries.com.









Proper Isolation

For Indians and Harleys, the lighting isolator system's isolators connect the lighting from your major motorcycle accessory while removing the electrical load from the motorcycle's factory wiring, fuses, relays, computers, and electronics. Proper isolation keeps your stock motorcycle electrical system and factory warranty intact. The system features a modular design that includes a separate subharness, modules, and isolator. This system allows flexibility to use a variety of trailer types by swapping out a four- or fivewire subharness and to move the isolator from motorcycle to motorcycle. Info: Electrical Connection, 865/219-9192. ElectricalConnection.com. AIM



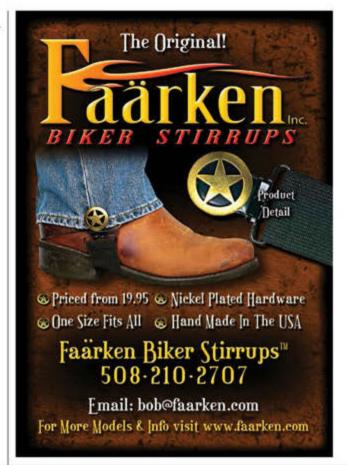
continued from page 91

taking the lead in producing designs heavy on heritage while Victory will develop and produce what Polaris calls "performance and muscle" — cruisers and baggers such as the X-1.

"We are investing in motorcycles," Krois explains to motorcycling's gathered fourth estate, and any doubt about that was left on the table when that same day Victory announced that it was going NHRA Pro-Stock racing. With ambitions to crack into the hotly contested quarter-mile drag racing arena, Victory is teaming up with S&S Cycle to develop an engine and dragster for two-time NHRA champion Matt Smith and his wife/co-rider Angie to compete in the Pro-Stock class this year.

"We're going to take on Harley," one Victory spokesperson confides. And his words will be verified by the time this issue of *American Iron Magazine* hits the newsstands because the NHRA season will already have begun with the first race at the Gatornationals in Gainesville, Florida.

No doubt the American V-twin landscape is becoming more and more interesting as time goes by. On one front, we've now got more than one American-made brand battling at NHRA race tracks, and we'll have American baggers vying on the chorus line to see which bike is the loudest. So far the Magnum X-1 has top honors from Victory's camp. And you can be a part of the magic, too, by underwriting the X-1's MSRP to the tune of \$24,499. **AIM**







STEVE MCQUEEN'S

1940 INDIAN FOUR

A rider's and collector's dream





F YOU THINK BACK OVER THE HISTORY OF CINEMA, you'll see legions of cool guys populating the screen. The combination of a great story, compelling characters, beautiful scenery, amazing cinematography, and a suave and debonair leading man projected three stories tall in front of you lends itself to creating that larger than life figure who defines an era.

It seems that each decade has had that outsized character, that one guy who comes to define a genre, an age, a belief, a look, or an attitude and who stands so head and shoulders above the rest that all other males of his generation pale in comparison. In the 1900s-20s it was the cowboy actor Tom Mix. In the '30s-40s it was, without a doubt, Clark Gable. The '50s had Marlon Brando.

That brings us to the '60s-70s, and I'm sure you know by now where this is all heading. Yes. The man himself: Steve McQueen. Steve was an actor extraordinaire, a passionate biker, motorcycle racer, racecar driver, you name it, he defined it in film during the 1960s and '70s. His web site probably says it best: "Steve McQueen left an indelible

imprint as one of Hollywood's sexiest leading men. His balance of masculinity and sensitivity made him both a man's man and a ladies' man all at once. His revered roles in films such as Bullitt, The Great Escape, The Thomas Crown Affair, and Papillion have been often imitated but never repeated. An actor, racecar driver, and father, McOueen was the epitome of the American dream, rising from hardscrabble circumstances to become one of the most famous movie stars in the world." You can judge just how influential McQueen was by the staying power of his image and the popularity of his persona all these decades later.

Of course, for motorcyclists, his story line in 1963's *The Great Escape* was nothing short of amazing. When he took that

heisted German BMW and sailed over the barbed wire fence in a bid for freedom, he sailed right into our hearts and stayed there forever. Stuntman Bud Ekins did the actual jump, and who can blame the production company for protecting Steve's health as he was a star on a meteoric rise to fame and fortune?

1968 saw the release of *Bullitt*, a movie in which he played police Lt. Frank Bullitt, a cop assigned to protect a mob boss' brother who is about to rat out his sibling. The now famous car chase scene in which he drives a 1968 Mustang through the streets of San Francisco immortalized him in the world of horsepower lovers everywhere.

On Any Sunday, a motorcycle cult classic shot by Bruce Brown, was released in 1971. The film is a documentary featuring Mert Lawwill, Roger DeCoster, Malcom Smith, Steve McQueen, and others through a season of desert racing, motocross, and Grand Nationals racing. It was an easy fit for McQueen, as he cut his teeth as a racer, finding

victory and income on the track at the Long Island City Raceway as he studied acting at the Neighborhood Playhouse in New York City beside fellow actor and motorcycle racer James Garner.

Steve was an avid racer in real life as well, on two wheels and four. He competed in the British Touring Championship, 12 Hours of Sebring, 24 Hours of Le Mans, Baja 1000, Elsinore Grand Prix, and many other races. One of his more famous quotes is "I'm not sure whether I'm an actor who races or a racer who acts." He was a great collector, and acquired over 100 vintage motorcycles and cars. He was known to show up at AMCA meets in California riding cool antique motorcycles, everything from a Triumph Twin to an Indian Four.

He was married three times, once to actress Nellie Adams, once to actress Ali MacGraw, and finally to model Barbara Minty. He passed away in a hospital in Ciudad Juarez, Mexico, in 1980, where he went to receive unauthorized treatment for pleural mesothelioma, a disease he battled for a few years.



In 1984, his family held an auction of his bikes, cars, and personal memorabilia at the Imperial Palace and Casino in Las Vegas, and it was a frenzy of collectors bidding to own a piece of their hero.

Our featured 1940 Indian Four is out of that auction, but when it rolled across the stage, it was an incomplete restoration at the time. It was a rolling chassis with the motor/tranny combo on a skid next to it. Steve had ridden it often, and according to his wife, Barbara, they shared many a ride on the trusty Four. But at the time of Steve's death, it was under restoration and apart. The winning bidder took it through a complete restoration, and it changed hands a few more times before it was acquired by the LaQuay Collection in 2013. It still has its original leather key pouch that Steve carried the key in, infusing this old Four with history and significance to which few machines can lay claim.

The Indian Four has scaled the peak of collectability and sits at the top of that small pyramid of elite machines that

everyone wants in his collection. Its lineage can be traced back to 1911-12 and the production of the first Henderson Four motorcycles, designed and built by William Henderson and his brother Tom. They formed Henderson Motorcycle Company in Detroit and went on to produce motorcycles until 1917, at which time they sold the concern to Ignaz Schwinn of Schwinn bicycle fame, who in turn moved Henderson production to Chicago. In 1919, William Henderson had a disagreement with Schwinn about the future of the brand and its design. He quit to form Ace Motorcycles. Aces were produced in quantity until 1924, and sporadically thereafter. In 1927, Indian was looking to fill out its model offerings and add a fourcylinder machine to the lineup. So Indian bought out Ace and rolled out the first Indian 4/Ace, which still had

Ace as part of the tank decal. With the Henderson and Ace lineage, it was probably wise to incorporate the Ace name at first, since that brand had a loyal following, and Indian wanted to capitalize on that reputation and good will.

Indian Fours would be produced from 1927-42, whereupon World War II would interrupt the output, and Indian



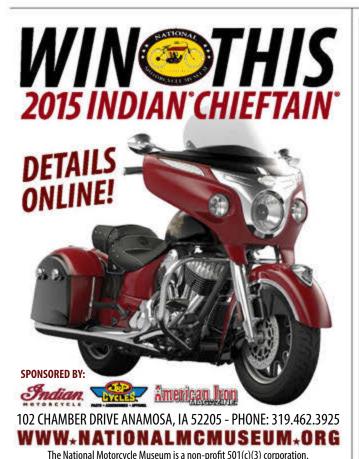
management chose not to continue the model after the war's end. The cost of production, in conjunction with the advent of overhead valve machines, spelled its demise. The Indian Fours slipped into history, but many were saved as people recognized early on the machine's special characteristics and collectability. Thank goodness!

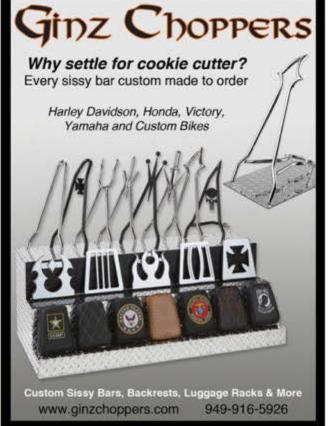
This 1940 78" motor features an inline four cylinder design, with the cylinders cast in pairs. It's mated to a three-speed transmission, fired by a distributor six-volt setup; it's engaged by foot clutch/handshift operation. The chassis uses a leaf spring front end, the frame incorporates a set of rear shocks to smooth out the road, and it rolls on 16" tires and rims. The full-skirted fenders.

together with the straight back shotgun exhaust system add to the flow of this last-year model 442 machine.

Finished in Indian Red paint, with just the right amount of chrome, this bike would stop traffic wherever it's ridden.

Steve McQueen understood the 1940 Indian Four's timeless beauty and inherent charm, and collectors everywhere clamor for an opportunity to own such a rare machine with such a wonderful provenance! **AIM**





continued from page 44

penses up to \$50,000 but the total bill for medical care adds up to \$100,000. Who pays the extra \$50,000? You do! Most people don't have a spare pile of cash on hand to pay this kind of bill. Attorneys for the accident victim, the hospital, and the insurance company will start looking at your assets. Do you own a home? Do you have bank accounts? What is your net worth? Could you be an heir or heiress to a family fortune?

One way to avoid financial devastation after an accident when you were at fault is a personal liability insurance policy, often called an umbrella policy. An umbrella policy covers more than motorcycle accidents. All the vehicles, watercraft, aircraft, and real estate you own should be listed on the policy.

Umbrella policies are relatively affordable for the peace of mind they provide. The premium will depend on how many homes, cars, trucks, motorcycles, boats, and aircraft the policyholder owns. Umbrella policies are available in million dollar increments and generally stipulate that the policyholder has certain dollar values of liability coverage on his other policies. The umbrella coverage pays for claims or lawsuits that exceed the value of the primary coverage.

For example, suppose the judgment in a lawsuit is \$1,200,000 and the person who caused the accident has \$500,000 in primary liability coverage on his bike and a one million dollar umbrella policy. The primary coverage pays \$500,000 and the umbrella policy pays \$700,000.

Do you need an umbrella policy? Ask your insurance agent to analyze your financial situation and your net worth. Then decide if an umbrella policy is right for you.

Conclusion

NOW THAT YOU'VE READ THIS ARTICLE, read the motorcycle insurance policy you should have stashed somewhere in your home. Study the limits of liability. Scrutinize the exclusions. Examine the dec sheet to make sure the policy hasn't expired. Ask your insurance agent about any discounts you may qualify for. Inquire about deductibles and how changes could save you money. Be an informed policyholder to avoid insurance problems down the road. **AIM**



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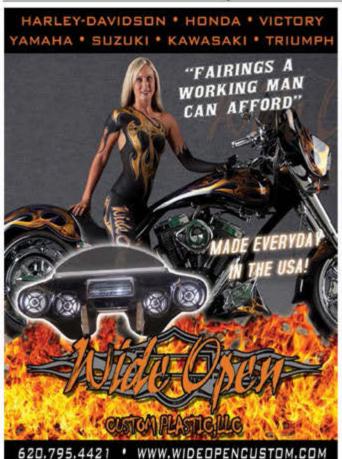


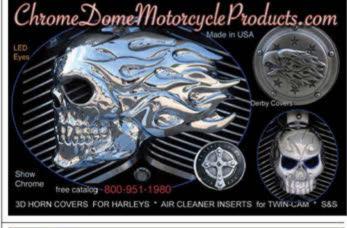




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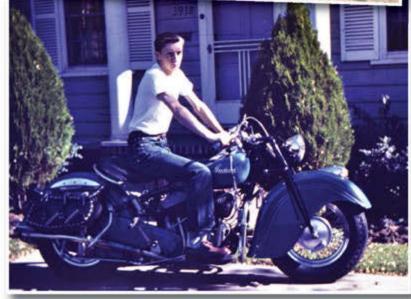






Ray Pilon sent in this old pic of his father. Ambrose. who was from Vankleek Hill, Ontario, Canada. Ambrose is sitting on his 1930s Indian Scout. Ray told us the picture was taken sometime in the 1940s. **RAY PILON** Richmond, Ontario, Canada





Sharon Koenig wanted to share this 1948 photo of her dad, John Seigle, in front of his home in Salt Lake City, Utah. She tells us "His parents bought this new Indian for him as a graduation present from high school." Nice! **SHARON KOENIG** Erie, CO

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James Claeys, Seattle, member of the Bad Chickens Motorcycle Club, on a 2014 Indian* Chief* Vintage through Lebec, CA

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